User's Guide

Acronis True Image 9.1 Server for Windows

Acronis

Compute with confidence

www.acronis.com

Copyright © Acronis, Inc., 2000-2006. All rights reserved.

“Acronis”, "Acronis Compute with Confidence", “Acronis Snap Restore”, “Acronis Recovery Manager, “Acronis Secure Zone” and the Acronis logo are trademarks of Acronis, Inc.

Linux is a registered trademark of Linus Torvalds.

Windows and MS-DOS are registered trademarks of Microsoft Corporation.

All other trademarks and copyrights referred to are the property of their respective owners.

Distribution of substantively modified versions of this document is prohibited without the explicit permission of the copyright holder.

Distribution of this work or derivative work in any standard (paper) book form for commercial purposes is prohibited unless prior permission is obtained from the copyright holder.

DOCUMENTATION IS PROVIDED «AS IS» AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

END-USER LICENSE AGREEMENT

BY ACCEPTING, YOU (ORIGINAL PURCHASER) INDICATE YOUR ACCEPTANCE OF THESE TERMS. IF YOU DO NOT WISH TO ACCEPT THE PRODUCT UNDER THESE TERMS, YOU CAN CHOOSE NOT TO ACCEPT BY SELECTING "I decline..." AND NOT INSTALLING THE SOFTWARE.

Acronis True Image Server for Windows (the Software) is Copyright © Acronis, Inc., 2000-2006. All rights are reserved. The ORIGINAL PURCHASER is granted a LICENSE to use the software only, subject to the following restrictions and limitations.

1. The license is to the original purchaser only, and is not transferable without prior written permission from Acronis.

2. The original purchaser can use the software on a single computer. You cannot use the software on more than a single machine, even if you own or lease all of them, without the written consent of Acronis.

3. The original purchaser cannot engage in, nor permit third parties to engage in, any of the following:

A. Providing or permitting use of by, or transferring the software to, third parties.

B. Providing use of the software in a computer service business, network, timesharing or multiple user arrangement to users who are not individually licensed by Acronis.

C. Making alterations or copies of any kind in the software (except as specifically permitted above).

D. Attempting to unassemble, decompile or reverse-engineer the software in any way.

E. Granting sublicenses, leases, or other rights in the software to others.

F. Making copies, or verbal or media translations, of the users guide.

G. Making telecommunication data transmission of the software.

Acronis has the right to terminate this license if there is a violation of its terms or default by the original purchaser. Upon termination for any reason, all copies of the software must be immediately returned to Acronis, and the original purchaser shall be liable to Acronis for any and all damages suffered as a result of the violation or default.

ENTIRE RISK

THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE SOFTWARE IS WITH YOU THE PURCHASER. Acronis DOES NOT WARRANT THAT THE SOFTWARE OR ITS FUNCTIONS WILL MEET YOUR REQUIREMENTS OR THAT THE OPERATION OF THE SOFTWARE WILL BE UNINTERRUPTED OR ERROR FREE OR THAT ANY DEFECTS WILL BE CORRECTED.

NO LIABILITY FOR CONSEQUENTIAL DAMAGES IN NO EVENT SHALL Acronis OR ITS VENDORS BE LIABLE FOR ANY DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR THE LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OR INABILITY TO USE THE SOFTWARE, EVEN IF Acronis HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

SOFTWARE USAGE TERMS AND CONDITIONS

Under current legislation, the «License Agreement» is considered a contract between you and Acronis Inc. The contract is a legal document and its violation may result in legal action. Illegal use and/or distribution of this software will be prosecuted.

Table of Contents

Chapter 1. Introduction 7

1.1 Acronis True Image Server for Windows – a complete solution for corporate users 7
1.2 New in Acronis True Image 9.1 Server for Windows 8
1.4 System requirements and supported media 9
1.4.1 Minimum system requirements 9
1.4.2 Supported operating systems 9
1.4.3 Supported file systems 10
1.4.4 Supported storage media 10
1.5 Technical support 10

Chapter 2. Acronis True Image Server for Windows installation and starting 12

2.1 Installing Acronis True Image Server for Windows 12
2.1.1 Acronis Universal Restore installation 13
2.2 Extracting Acronis True Image Server for Windows 13
2.3 Running Acronis True Image Server for Windows 13
2.4 Removing Acronis True Image Server for Windows 13

Chapter 3. General information and proprietary Acronis technologies 14

3.1 The difference between file archives and disk/partition images 14
3.2 Full, incremental and differential backups 14
3.3 Acronis Secure Zone 15
3.4 Acronis Startup Recovery Manager 16
3.4.1 How it works 16
3.4.2 How to use 16
3.5 Acronis Snap Restore 16
3.5.1 How it works 16
3.5.2 How to use 17
3.6 Acronis Universal Restore 17
3.7.1 How to use 18
3.7.2 Using Acronis Universal Restore in virtual environment 19
3.7.3 Hints on using Acronis Universal Restore 19
3.7.4 Benefits 20
3.7 Using dynamic disks and volumes 20
3.8 Backing up to tape drive 20
3.9 Viewing disk and partition information 21

Chapter 4. Using Acronis True Image Server for Windows 22

4.1 Main program window 22
4.2 Available operations 24

Chapter 5. Creating backup archives 26

5.1 Backing up files and folders (file backup) 26
5.2 Backing up disks and partitions (image backup) 30
5.3 Setting backup options 32
5.3.1 Archive protection 33
5.3.2 Source files exclusion 33
5.3.3 Pre/post commands 33
5.3.4 Database support 34
5.3.5 Compression level 35
5.3.6 Backup performance 35
5.3.7 Fast incremental/differential backup 36
5.3.8 Archive splitting 36
5.3.9 File-level security settings 37
5.3.10 Media components 37
5.3.11 Additional settings 38

 Copyright © Acronis, Inc., 2000-2006

Chapter 6. Restoring the backup data 39
6.1 Restore under Windows or boot from CD? 39
6.1.1 Network settings in rescue mode 39
6.2 Restoring files and folders from file archives 40
6.3 Restoring disks/partitions or files from images 43
6.3.1 Starting the Restore Data Wizard 43
6.3.2 Archive selection 43
6.3.3 Restoration type selection 44
6.3.4 Selecting a disk/partition to restore 45
6.3.5 Selecting a target disk/partition 45
6.3.6 Changing the restored partition type 46
6.3.7 Changing the restored partition file system 47
6.3.8 Changing the restored partition size and location 47
6.3.9 Assigning a letter to the restored partition 48
6.3.10 Restoring several disks or partitions at once 48
6.3.11 Using Acronis Universal Restore 48
6.3.12 Setting restore options 49
6.3.13 Restoration summary and executing restoration 50
6.4 Setting restore options 50
6.4.1 Files to exclude from restoration 50
6.4.2 Files overwriting mode 51
6.4.3 Pre/post commands 51
6.4.4 Restoration priority 51
6.4.5 File-level security settings 51
6.4.6 Driver search location 51
6.4.7 Additional settings 52

Chapter 7. Scheduling tasks 53
7.1 Creating scheduled tasks 53
7.1.1 Setting up daily execution 54
7.1.2 Setting up weekly execution 55
7.1.3 Setting up monthly execution 56
7.1.4 Setting up one-time execution 56
7.2 Managing scheduled tasks 57

Chapter 8. Managing Acronis Secure Zone 58
8.1 Creating Acronis Secure Zone 58
8.2 Resizing Acronis Secure Zone 59
8.3 Deleting Acronis Secure Zone 59

Chapter 9. Creating bootable media 61
9.1 Creating Acronis rescue media 61
9.2 Creating Win PE ISO with Acronis True Image Server for Windows 62

Chapter 10. Other operations 64
10.1 Validating backup archives 64
10.2 Operation results notification 64
10.2.1 Email notification 65
10.2.2 WinPopup notification 65
10.3 Viewing logs 66
10.4 Event tracing 67
10.4.1 Windows event log 67
10.4.2 SNMP notifications 68
10.5 Managing System Restore 68

Chapter 11. Mounting an image as a virtual drive 69
11.1 Mounting an image 69
11.2 Unmounting an image 71

Copyright © Acronis, Inc., 2000-2006

Chapter 12. Transferring the system to a new disk 72
12.1 General information 72
12.2 Security 72
12.3 Executing transfers 73
12.3.1 Selecting Clone mode 73
12.3.2 Selecting source disk 73
12.3.3 Selecting destination disk 74
12.3.4 Partitioned destination disk 75
12.3.5 Old and new disk partition layout 75
12.3.6 Old disk data 75
12.3.7 Destroying the old disk data 76
12.3.8 Selecting partition transfer method 77
12.3.9 Partitioning the old disk 78
12.3.10 Old and new disk partition layouts 78
12.3.11 Cloning summary 79
12.4 Cloning with manual partitioning 79
12.4.1 Old and new disk partition layouts 79

Chapter 13. Adding a new hard disk 81
13.1 Selecting a hard disk 81
13.2 Creating new partitions 81
13.3 Disk add summary 82

Chapter 14. Command-line mode and scripting 83
14.1 Working in the command-line mode 83
14.1.1 Supported commands 83
14.1.2 trueimagecmd.exe usage examples 88
14.1.3 Command-line mode usage under DOS 89
14.2 Scripting 89
14.2.1 Script execution parameters 89
14.2.2 Script structure 90
14.2.3 Script usage examples 91

 Copyright © Acronis, Inc., 2000-2006

Chapter 1. Introduction

1.1 Acronis True Image Server for Windows – a complete solution for corporate users

You have come to rely on your servers to run your business and retain key enterprise data. Acronis True Image Server for Windows provides comprehensive, reliable, and cost-effective system backup and recovery for corporate servers. With Acronis True Image Server for Windows you have peace of mind knowing you are protected and can recover from any situation.

Minimizes downtime

Acronis True Image Server for Windows enables you to restore systems in minutes, not hours or days. An entire system can be restored from an image that includes everything the system needs to run: the operating system, applications, databases, and configurations. No reinstallation or reconfiguration is required. Moreover, complete system restoration can be performed to an existing system or to a new system with different hardware or to virtual machines. With the new Acronis Snap Restore feature, users can access a system during restore, further decreasing downtime. File-based backups provide you with the flexibility to only backup specific critical files.

Eases Administration

Wizards guide users through backup and recovery tasks, ensuring the product can be implemented with minimal user training.

Automates Backup

With the scheduling capability in Acronis True Image Server for Windows, you simply create backup tasks, tailored by group, at certain times or at certain events, automating backups.

To ensure that backups have occurred, or user intervention is required, you can request notifications via email or pop-up. You can view Acronis events in Windows Application Events Log or Acronis own log. Log messages can be automatically sent out to SNMP clients.

The product also supports the creation of custom commands before and after backups. For example, users can automatically run anti-virus products before an image is created and verify the validity of backups after they have been created.

Ensures 24 X 7 Uptime

With the Acronis Drive Snapshot, systems can be imaged while they are in use, supporting 24 by 7 availability. This technology enables the product to backup and image critical operating system files, the master boot record and any partition-based boot records without requiring a reboot. A CPU allocation feature allows you to limit the amount of CPU usage for the application to maximize the CPU's availability for mission critical applications. Moreover, users can control hard disk drive writing speeds and control network bandwidth used during backups, allowing minimal disruption of business operations.

A several-second database suspension is provided for correct backup of mission critical applications such as Microsoft Exchange Server, Microsoft SQL Server and Oracle with support VSS. If your database or operating system does not support VSS, Acronis True Image Server for Windows will execute your custom commands to realize database suspension.

Supports Cutting Edge Technology

Copyright © Acronis, Inc., 2000-2006

Businesses today are moving to leverage the latest technologies, dual-core 64 bit processors and 64 bit operating systems. With Acronis True Image Server for Windows, you can protect these new machines, as well as legacy ones, running one solution.

Leverages Existing Technology Investments

The product can leverage your current storage infrastructure by supporting a wide variety of storage media, so you can avoid costly hardware purchases to implement the solution. The product supports key storage technologies such as: Direct Attached Storage (DAS), Network Attached Storage (NAS), Storage Area Networks (SAN), Redundant Arrays of Independent Disks (RAID) devices, tapes, USB and IEEE-1394 (FireWire) compliant storage devices, CDs, DVDs, removable drives (Floppy, Zip, etc.) and shared storage. Moreover, the product ensures that you maximize the space on these resources with four levels of compression.

Disk cloning and new disk deployment

Acronis True Image Server for Windows can be used to clone an image onto multiple servers. For example, a company purchased several servers and needs similar environments on each of them. Traditionally, an IT manager should install the operating system and programs on every server. With Acronis True Image Server for Windows, the IT manager can create a disk image of the first system deployed. That image can then be duplicated onto multiple servers.

If you need to upgrade the server hard disk drive, Acronis True Image Server for Windows simplifies the task to few mouse clicks creating the exact copy of your old disk to a new one and adjusting partitions size to fit a new hard disk.

1.2 New in Acronis True Image 9.1 Server for Windows

- **Support for Windows XP Professional x64 Edition, Windows Server 2003 x64 Editions**
- **Direct backup to DVD and bootable DVD creation**
- **Support for GPT hard disks (disks with GUID partition table)**
- **Backup to/restore from FTP servers**
- **Acronis Snap Restore** – A user can start working in seconds while the system is still being restored
- **Acronis Universal Restore (optional)** – Hardware-independent live system restore
- **File-level backup and recovery**, including files opened in exclusive usage mode - In addition to an entire partition/system backup
- **Differential backup** – Backup only the changes made since the full backup
- **Fast incremental/differential backup** – Users can choose to compare files with their archived copies by date/size (fast process) or by file contents (precise, but time-consuming process)
- **Files and folders backup/restore filtering** – Saves space when creating file backups by only backing up files of the types the users want to keep. Similarly, a user can tell the program not to restore certain files from the file archive
- **Microsoft Volume Shadow Copy Service (VSS) support** (for Windows 2003 Server and higher) – Easily backup VSS compatible databases (Exchange, Oracle, SQL Server) without taking databases offline and ensuring data consistency

 Copyright © Acronis, Inc., 2000-2006

- **Pre/post backup/restore commands** – Users can specify their own commands which will be executed before and after the backup or restore process. For example, one might want to remove some temporary files from the disk before starting a backup or configure a third party antivirus product to be started each time before the backup starts
- **User-editable default backup options** – Users can configure and save backup parameters, such as backup performance (hard disk writing speed, network bandwidth during backups), validate backup archive after backup completion, file-level security settings (preserving files' security settings in the archive, storing encrypted files in encrypted or decrypted state)
- **User-editable default restore options** – Users can configure and save restore parameters, such as files overwriting mode, the original or current date and time for restored files etc.
- **Read-write mode** of mounting images
- **Bootable backup media** – When backing up to removable media, users can make this media bootable in the same manner as a rescue CD, so separate recover media is not required
- **Bootable disks ISOs and RIS packages** – In addition to burning a bootable rescue disk, users can save its ISO image for burning later, or create a RIS package for remote boot of Acronis True Image Server for Windows
- **Windows Event Log and SNMP support** – Store event log messages, issued by Acronis True Image Server for Windows, to Windows Event Log or send them to SNMP clients
- **Manage System Restore tool** (for Windows 2003 Server and higher) – Turn on/off the Windows native System Restore tool directly from Acronis True Image Server for Windows
- **Context Help**

1.4 System requirements and supported media

1.4.1 Minimum system requirements

Acronis True Image Server for Windows requires the following hardware:

- Pentium processor or higher
- 256 MB RAM
- FDD or CD-RW drive for bootable media creation
- Mouse (recommended).

1.4.2 Supported operating systems

Acronis True Image Server for Windows

- Windows NT 4.0 Workstation SP6/2000 Professional SP4/XP Professional SP2
- Windows NT 4.0 Server SP6/2000 Server/2000 Advanced Server/2003 Server
- Windows XP Professional x64 Edition, Windows Server 2003 x64 Editions

Acronis Universal Restore (optional)

- Windows 2000 Professional SP4/XP Professional SP2

Copyright © Acronis, Inc., 2000-2006

- Windows 2000 Server/2000 Advanced Server/2003 Server
- Windows XP Professional x64 Edition, Windows Server 2003 x64 Editions

Acronis True Image Server for Windows also enables creating a bootable diskette or CD-R/W that can back-up and restore a disk/partition on a computer running any PC-based operating system including Linux®.

1.4.3 Supported file systems

- FAT16/32
- NTFS
- Ext2/Ext3
- ReiserFS
- Reiser4
- Linux SWAP
- XFS
- JFS

If a file system is not supported or is corrupted, Acronis True Image Server for Windows can copy data using a sector-by-sector approach.

For XFS and JFS file systems the partition resizing feature is not supported.

1.4.4 Supported storage media

- Hard disk drives
- Networked storage devices such as Storage Area Networks (SANs) and Network Attached Storage (NAS)
- SCSI tape drives
- IDE and SCSI RAID controllers of any level
- FTP-servers*
- CD-R/RW, DVD-R/RW, DVD+R (including double-layer DVD+R), DVD+RW, DVD-RAM**
- USB 1.0 / 2.0, FireWire (IEEE-1394) and PC card storage devices
- ZIP®, Jaz® and other removable media

* - an FTP-server must allow passive mode for file transfers. Data recovery directly from FTP-server requires the archive to consist of files no more than 2 GB in size.

** - Burned write-once discs cannot be read in Windows NT 4 without third-party software. Burned rewritable discs cannot be read in Linux without kernel patch.

1.5 Technical support

Users of legally purchased copies of Acronis True Image Server for Windows are entitled to free technical support from Acronis. If you experience problems installing or using Acronis products that you can't solve yourself by using this guide, then please contact Acronis Technical Support.

 Copyright © Acronis, Inc., 2000-2006

More information about contacting Acronis Technical Support is available at the following link: http://www.acronis.com/enterprise/support/

Chapter 2. Acronis True Image Server for Windows installation and starting

2.1 Installing Acronis True Image Server for Windows

To install Acronis True Image Server for Windows:

- run the Acronis True Image Server for Windows setup file
- in the Install Menu, select the program to install: Acronis True Image Server for Windows
- follow the Install Wizard instructions on the screen.

Acronis True Image Server for Windows Install Window

Typical, **Custom** and **Complete** installation is available. Having pressed **Custom**, you can choose to install, besides Acronis True Image Server for Windows, **Rescue Media Builder** and **Bart PE plug-in**.

With **Rescue Media Builder** you can create bootable rescue disks or RIS packages (see details in *Chapter 9. Creating bootable media*). You might not need this tool if you purchased a boxed product that contains a bootable CD. Installing the **Bootable Rescue Media Builder** will allow you to create bootable media, its ISO image or a bootable RIS package at any time from the main program window or running **Bootable Rescue Media Builder** on its own.

The well-known **Bart PE** utility is used to boot into a Windows-like environment from CD. Applications are installed into Bart PE in the form of plug-ins. Choosing Bart PE plug-in installation (disabled by default) provides the ability to include Acronis True Image Server for Windows into a Bart PE plug-in tab. The plug-in files will be placed to the installation folder along with other program files.

When installed, Acronis True Image Server for Windows creates a new device in the Device Manager list (**Control Panel -> System -> Hardware -> Device Manager -> Acronis Devices -> Acronis TrueImage Backup Archive Explorer**). Do not disable or uninstall this device, as it is necessary for connecting image archives as virtual disks (see *Chapter 11. Mounting an image as a virtual drive*).

Copyright © Acronis, Inc., 2000-2006

2.1.1 Acronis Universal Restore installation

Acronis Universal Restore is an option to Acronis True Image Server for Windows. It should be purchased separately and installed from a separate setup file.

Acronis Universal Restore can only be installed on a computer where at least one of the following Acronis components is installed:

Acronis True Image Server for Windows

Bootable Media Builder.

Acronis Universal Restore can be installed on a networked computer either locally, by running the setup program, or remotely using one of remote installation services, for example, Systems Management Server (a component of Microsoft Windows NT BackOffice program package).

After installation, Acronis Universal Restore automatically plugs in one or more of above program components. Acronis True Image Server for Windows name, displayed in its main window, changes to **Acronis True Image Server for Windows with Universal Restore**.

2.2 Extracting Acronis True Image Server for Windows

When installing Acronis True Image Server for Windows, you can save the setup (.msi) file on a local or network drive. This will help when modifying or recovering the existing component installation.

To save a setup file:

- run the Acronis True Image Server for Windows setup file;
- in the Install Menu, right-click on the program name and select **Extract**;
- select a location for the setup file and click **Save**.

2.3 Running Acronis True Image Server for Windows

You can run Acronis True Image Server for Windows in Windows by selecting **Start -> Programs -> Acronis -> Acronis True Image Server for Windows -> Acronis True Image Server for Windows** or clicking on the appropriate shortcut on the desktop.

If your operating system does not load for some reason, you can run Acronis Startup Recovery Manager. However, this must be activated prior to use; see *3.4 Acronis Startup Recovery Manager* to learn more about this procedure. To run the program, press F11 during server bootup, when you see a corresponding message that tells you to press that key. Acronis True Image Server for Windows will be run in the standalone mode, allowing you to recover the damaged partitions.

If your disk data is totally corrupted and you cannot boot (or if you have not activated Acronis Startup Recovery Manager), load the standalone Acronis True Image Server for Windows version from the bootable media (supplied with the retail box or created by you using Rescue Media Builder) or RIS-server. Then you will be able to restore the disk from its previously created image.

2.4 Removing Acronis True Image Server for Windows

Select **Control panel -> Add or remove programs -> <Acronis True Image Server for Windows> -> Remove**. Then follow instructions on the screen. You may have to reboot your computer afterwards to complete the task.

Copyright © Acronis, Inc., 2000-2006

Chapter 3. General information and proprietary Acronis technologies

3.1 The difference between file archives and disk/partition images

A backup archive is a file or a group of files (also called in this Guide “backups”), that contains a copy of selected files/folders data or a copy of all information stored on selected disks/partitions.

When you back up files and folders, only the data, along with the folder tree, are compressed and stored.

Backing up disks and partitions is performed in a different way: Acronis True Image Server for Windows stores a sector-by-sector snapshot of the disk, which includes the operating system, registry, drivers, software applications and data files, as well as system areas hidden from the user. This procedure is called “creating a disk image,” and the resulting backup archive is often called a disk/partition image.

Acronis True Image Server for Windows stores only those hard disk parts that contain data (for supported file systems). Further, it does not back up swap file information (pagefile.sys) and hiberfil.sys (a file that keeps RAM contents when the computer goes into hibernation). This reduces image size and speeds up image creation and restoration.

A partition image includes all files and folders independent of their attributes (including hidden and system files), boot record, FAT (file allocation table), root and the zero track of the hard disk with master boot record (MBR).

A disk image includes images of all disk partitions as well as the zero track with master boot record (MBR).

By default, files in all Acronis True Image Server for Windows archives have a “.tib” extension.

It is important to note that you can restore files and folders not only from file archives, but from disk/partition images, too. To do so, mount the image as a virtual disk (see *Chapter 11. Mounting an image as a virtual drive*) or start the image restoration and select **Restore specified files or folders**.

3.2 Full, incremental and differential backups

Acronis True Image Server for Windows can create full, incremental and differential backups.

A **full backup** contains all data at the moment of backup creation. It forms a base for further incremental or differential backup or is used as a standalone archive. A full backup has the shortest restore time as compared to incremental or differential ones.

An **incremental backup** file only contains data changed since the last full or incremental backup creation. Therefore, it is smaller and takes less time to create. But as it doesn’t contain all data, all the previous incremental backups and the initial full backup are required for restoration.

Unlike incremental backup, when every backup procedure creates the next file in a “chain,” a **differential backup** creates an independent file, containing all changes against the initial full archive. Generally, a differential backup will be restored faster than an incremental one, as it does not have to process through a long chain of previous backups.

 Copyright © Acronis, Inc., 2000-2006

A standalone full backup may be an optimal solution if you often roll back the system to the initial state (like in a gaming club or Internet café, to undo changes made by the guests). In this case, you need not re-create the initial full image, so the backup time is not crucial, and the restore time will be minimal.

Alternatively, if you are interested in saving only the last data state to be able to restore it in case of system failure, consider the differential backup. It is particularly effective if your data changes tend to be little as compared to the full data volume.

The same is true for incremental backup. In addition, it is most useful when you need frequent backups and possibility to roll back to any of stored states. Having created a full backup once, if you then create an incremental backup each day of a month, you will get the same result as if you created full backups every day. However, the cost in time and disk space (or removable media usage) will be as little as one tenth as much.

It is important to note that the above arguments are nothing but examples for your information. Feel free to make up your own backup policy in accordance with your specific tasks and conditions. Acronis True Image Server for Windows is flexible enough to meet any real-life demands.

An incremental or differential backup created after a disk is defragmented might be considerably larger than usual. This is because the defragmentation program changes file locations on disk and the backups reflect these changes. Therefore, it is recommended that you re-create a full backup after disk defragmentation.

3.3 Acronis Secure Zone

The Acronis Secure Zone is a special hidden partition for storing archives on the computer system itself. For archive security purposes, ordinary applications cannot access it. In the Acronis True Image Server for Windows Wizards' windows the zone is listed along with all partitions available for storing archives. Acronis Secure Zone is necessary for using Acronis Startup Recovery Manager and Acronis Snap Restore features (see below).

Acronis Secure Zone is always available for archive creation as long as there is space for the backup file. If there is not enough space, older archives will be deleted to create space.

Acronis True Image Server for Windows uses the following scheme to clean up Acronis Secure Zone:

- If there is not enough free space in the zone to create a backup, the program deletes the oldest full backup with all subsequent incremental/differential backups.
- If there is only one full backup (with subsequent incremental/differential backups) left and a full backup is in progress, then the old full backup and incremental/differential backups are deleted.
- Otherwise, (only one full backup left, and an incremental/differential backup is in progress) you will get a message about space error. In that case you will have to either re-create the full backup or increase Acronis Secure Zone.

Thus, you can back up data automatically on a schedule (see *Chapter 7. Scheduling tasks*), and not worry about zone overflow issues. However, if you keep long chains of incremental backups, it will be a good practice to periodically check the zone free space, indicated on the second page of the **Manage Acronis Secure Zone** wizard.

For information on how to create, resize or delete Acronis Secure Zone using this wizard, see in *Chapter 8. Managing Acronis Secure Zone*.

Copyright © Acronis, Inc., 2000-2006

3.4 Acronis Startup Recovery Manager

3.4.1 How it works

The Acronis Startup Recovery Manager enables starting Acronis True Image Server for Windows without loading the operating system. With this feature, if the operating system won't load for some reason, you can run Acronis True Image Server for Windows by itself to restore damaged partitions. As opposed to booting from Acronis removable media or RIS server, you will not need a separate media or network connection to start Acronis True Image Server for Windows.

3.4.2 How to use

To be able to use Acronis Startup Recovery Manager at boot time, prepare as follows:

1. Install Acronis True Image Server for Windows.

2. Create Acronis Secure Zone on the server hard disk (see *Chapter 8. Managing Acronis Secure Zone*).

3. Activate Acronis Startup Recovery Manager. To do so, click **Activate Acronis Startup Recovery Manager** and follow the Wizard's instructions.

If you try to activate Acronis Startup Recovery Manager while Acronis Secure Zone is missing from the system, you will be prompted to create the zone, then Acronis Startup Recovery Manager will be activated. Otherwise, Acronis Startup Recovery Manager will be activated immediately.

When Acronis Startup Recovery Manager is activated, it overwrites the master boot record (MBR) with its own boot code. If you have any third-party boot managers installed, you will have to reactivate them after activating the Startup Recovery Manager. For Linux loaders (e.g. LiLo and GRUB), you might consider installing them to a Linux root (or boot) partition boot record instead of MBR before activating Acronis Startup Recovery Manager.

If failure occurs, turn on the computer and press F11 when you see the "Press F11 for Acronis Startup Recovery Manager" message. This will run a standalone version of Acronis True Image Server for Windows that only slightly differs from the complete version. For information on restoring damaged partitions, see *Chapter 6. Restoring the backup data*.

Be careful! Disk letters in standalone Acronis True Image Server for Windows might sometimes differ from the way Windows identifies drives. For example, the D: drive identified in the standalone Acronis True Image might correspond to the E: drive in Windows.

3.5 Acronis Snap Restore

With this feature you can boot the OS on a crashed computer before the system is completely restored from an image, and start work seconds after the restoration is launched. The restoration will be continued in the background.

This feature is currently available for images being restored from the Acronis Secure Zone (see above). Naturally, Acronis Snap Restore cannot be used if the image contains no operating system (a logical partition or disk image) or when restoring file archives.

3.5.1 How it works

When the restoration procedure is started, Acronis True Image Server for Windows:

 Copyright © Acronis, Inc., 2000-2006

1. Finds the sectors in the image which contain system files, and restores these sectors first. Thus, the OS is restored and can be started in a very short timeframe. Having started the OS, the user sees the folder tree with files, though file contents still is not recovered. Nevertheless, the user can start working.

2. Writes on the hard disk its own drivers, which intercept system queries to the files. When the user opens files or launches applications, the drivers receive the system queries and restore the sectors that are necessary for the current operation.

3. At the same time, Acronis True Image Server for Windows proceeds with the complete sector-by-sector image restoration in the background. However, the system requested sectors have the highest priority.

Finally, the image will be fully restored even if the user performs no actions at all. But if you choose to start working as soon as possible after the system failure, you will gain at least several minutes, considering that restoration of a 10-20 GB image (most common image size) takes about 10 minutes. The larger the image size, the more time you save.

3.5.2 How to use

To be able to use Acronis Snap Restore in case of system crash, prepare as follows:

1. Install Acronis True Image Server for Windows.

2. Create Acronis Secure Zone on the server hard disk (see *Chapter 8. Managing Acronis Secure Zone*).

3. Activate Acronis Startup Recovery manager (see *3.4 Acronis Startup Recovery Manager*) and create bootable media or RIS package with Acronis True Image Server for Windows (see *Chapter 9. Creating bootable* media).

4. Back up (image) the computer's system disk to Acronis Secure Zone (see *5.2 Backing up disks and partitions (image backup)*). You can back up other disks/partitions as well, but the system image is mandatory.

When performing Snap Restore, the current Acronis True Image Server for Windows version always restores the entire system disk. Therefore, if your system disk consists of several partitions, all of them must be included into the image. Any partitions which are missing from the image will be lost.

If failure occurs, boot the server from the bootable media, or RIS server, or using F11. Start the recovery procedure (see *6.3 Restoring disks/partitions or files from images*), select the system disk image from Acronis Secure Zone, choose **Use Snap Restore** and in the next window click **Proceed**. In a few seconds the computer will reboot to the restored system. Log in and start work – no more reboots or other actions are required.

You can perform Snap Restore running Acronis True Image Server for Windows in supported Windows Server operating systems as well. However, it is mandatory to have bootable media in case Windows cannot boot.

3.6 Acronis Universal Restore

A system disk image can be deployed easily on the hardware where it was created. However, if you change, for example, a motherboard or use another processor version, which is likely in case of hardware failure, the restored system could be unbootable. An attempt to transfer the system to a new, much more powerful computer will usually produce the same unbootable result because the new hardware is incompatible with the most critical drivers included in the image.

Using Microsoft System Preparation Tool (Sysprep) does not solve this problem, because Sysprep permits replacing drivers only for Plug-and-Play devices (sound cards, network adapters, video cards etc.). As for system Hardware Abstraction Layer (HAL) and mass storage device drivers, they must be identical on the source and the target computers (see Microsoft Knowledge Base, articles 302577 and 216915).

Acronis Universal Restore technology provides an efficient solution for hardware-independent system restoration by replacing the crucial Hardware Abstraction Layer (HAL) and mass storage devices drivers.

Acronis Universal Restore allows automatic or manual selection of the HAL and mass storage device drivers to fit the target hardware. It is important to note, that the primary goal of Acronis Universal Restore is to boot the restored system. The current version of this product handles only HAL and mass storage device drivers and does not install drivers for other devices (sound cards, network adapters, video cards etc.). Once the restored system starts, Windows takes control and initiates the usual first-start process. At this point, you will be able to specify drivers for other devices if Windows cannot find them automatically.

Acronis Universal Restore does not conflict with Microsoft System Preparation Tool (Sysprep). If you got accustomed to using Sysprep, you can use both tools on the same system.

Acronis Universal Restore is an add-on to Acronis True Image Server for Windows. It is purchased separately and installed from a separate setup file. Acronis Universal Restore can only be installed on a computer where at least one of the following Acronis components is installed:

Acronis True Image Server for Windows

Acronis Bootable Media Builder.

3.7.1 How to use

1. Boot the target computer into Acronis recovery environment from the bootable media, or RIS server, or using F11.

2. Start the recovery procedure (see *6.3 Restoring disks/partitions or files from images*) and select the image of the source computer for restoration.

3. You can specify Hardware Abstraction Layer (HAL) and mass storage devices drivers to be used by the restored system and/or provide a path to a driver repository on the network.

Hence, Acronis Universal Restore uses three sources for drivers search: the list of user-specified (enforced) drivers, driver repository, and the Windows default driver storage folders (in the image being restored). The program will find the most suitable drivers of all available and install them into the restored system. However, the user-defined drivers will have the priority. They will be installed, with appropriate warning, even if the program finds the better driver.

The Windows default driver storage folders are determined in the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\Current version\DevicePath. Generally, it is WINDOWS/inf folder. Generally, it is WINDOWS/inf folder.

4. When the restore process runs, Acronis True Image Server for Windows will:

- detect the machine type and install appropriate driver for HAL

- detect IDE and SCSI controllers and install appropriate drivers. If no appropriate drivers are found in all three above sources, the user will be prompted to browse the following locations for the drivers:

 Copyright © Acronis, Inc., 2000-2006

Network share drive

Floppy disk

CD drive

5. The machine reboots.

6. Windows takes control and initiates the usual first-start process.

The recovery procedure can proceed under Windows as well (for example, if the operating system is loaded from the C: drive, the system partition of the other computer can be restored from an image to the D: drive). In this case, the user prompt for driver search on Network-Floppy-CD will not be issued. If a compatible driver cannot be found, Windows will suggest to ignore it or cancel restoration.

3.7.2 Using Acronis Universal Restore in virtual environment

Virtual machine technologies provide a powerful tool to help accelerate the development, testing, deployment and support of PC applications. Using Acronis True Image Server for Windows with Acronis Universal Restore you can perform real-to-virtual and virtual-to-real computer migration in the same way as with real systems.

If the virtual hard drive uses SCSI controller, you should provide appropriate drivers while performing system restore to the virtual machine. For example, the widespread VMware environment requires Buslogic or LSI logic drivers. Use drivers bundled with your virtual machine software or download the latest drivers versions from the software manufacturer website.

3.7.3 Hints on using Acronis Universal Restore

1. The system recovered by Acronis Universal Restore may not start if the partition structure in the image or the target disk partitioning does not coincide with that of the source disk. As a result, the loader, restored from the image, will point to the wrong partition and the system will not boot or will malfunction.

Such might be the case if you:

- image not the entire source disk, but only the selected partitions

Keep in mind, that the source disk may have a hidden maintenance partition created by the computer vendor. Therefore, if you check each partition for backup instead of checking the disk, this hidden partition will not be included into the image.

- restore not the entire source disk, but only the selected partitions. In some cases, especially if your system resides on other than the first partition, this can confuse the loader and prevent the restored system from startup.

To avoid the problem, we recommend that you image and restore the entire system disk.

2. When migrating to RAID, be sure to provide an appropriate driver for the RAID controller, otherwise a basic HDD driver will be installed.

3. Acronis Universal Restore option is not available when restoring dynamic disks and volumes.

4. The Acronis Universal Restore option does not work if a computer is booted with Acronis Startup Recovery Manager (using F11) or the backup image is located in Acronis Secure Zone. This is because Acronis Startup Recovery Manager and Acronis Secure Zone are primarily meant for instant data recovery on the same computer.

Copyright © Acronis, Inc., 2000-2006

3.7.4 Benefits

1. Acronis Universal Restore can be used “after the fact”: it is not necessary to create an image with the option, you can restore any image to different hardware.

2. Acronis Universal Restore allows the user to exactly specify drivers during restore, enabling their maximum compatibility with the hardware.

3. Acronis Universal Restore does not strip security identifier (SID) and user profile settings. This means that you will not need to re-join your domain or re-map network user profiles after a restore.

4. Acronis Universal Restore supports a driver repository to centrally store all drivers so users don’t need to go looking for them.

3.7 Using dynamic disks and volumes

Acronis True Image Server for Windows supports dynamic disks, i.e. disks, managed by Windows Logical Disk Manager (LDM). You can create an image of one or more dynamic volumes of any type (simple, spanned, stripped etc.) and restore it to a dynamic volume of any type or MBR volume (partition) and vice versa, restore an MBR volume image to a dynamic volume. In each case, the program stores and restores volume contents only. The type or other properties of the target volume will not be changed.

However, the partition resize is possible when you restore a dynamic volume to a basic disk partition.

If Acronis True Image Server for Windows runs in rescue mode (for example, booted from Bootable Rescue media), dynamic disks will not be accessible. Therefore, to be able to repair a system partition, you must keep its image on a basic, network, or removable disk.

3.8 Backing up to tape drive

Acronis True Image Server for Windows supports SCSI tape drives. It can store backups on the tape and restore data from the tape, store large backups to multiple tapes, and append incremental/differential changes to a tape with the existing archives.

If a SCSI tape drive is connected to the server, the list of devices available for backup storage will be extended with a name corresponding to the drive type.

Backup and restore on the tape proceed in the same way as with other devices, with the following exceptions.

1. A full backup can be stored on an empty tape only. If you use tape that already contains data, its contents will be overwritten.

2. In case you want to keep more than one archive on the tape, for example, back up two disks separately, choose *incremental* backup mode instead of a *full* backup when you create an initial backup for the second disk. In other situations, incremental backup is used for appending changes to the previously created archive.

3. You do not have to provide filenames for backups.

You might experience short pauses that are required to rewind the tape.

Low-quality or old tape, as well as dirt on the magnetic head, might lead to pauses that can last up to several minutes.

 Copyright © Acronis, Inc., 2000-2006

3.9 Viewing disk and partition information

You can change the way of data representation in all schemes you see in various wizards.

To the right are three icons: **Arrange Icons by, Choose Details** and **i (Display the properties of the selected item)**, the last duplicated in the context menu invoked by right-clicking objects.

To sort messages by a particular column, click the header (another click will switch the messages to the opposite order) or **Arrange Icons by** button and select the column.

To select columns to view, right-click the headers line or left-click the **Choose Details** button. Then flag the columns you want to display.

If you click the **i (Display the properties of the selected item)** button, you will see the selected partition or disk properties window.

This window contains two panels. The left panel contains the properties tree and the right describes the selected property in detail. The disk information includes its physical parameters (connection type, device type, size, etc.); partition information includes both physical (sectors, location, etc.), and logical (file system, free space, assigned letter, etc.) parameters.

You can change the width of a column by dragging its borders with the mouse.

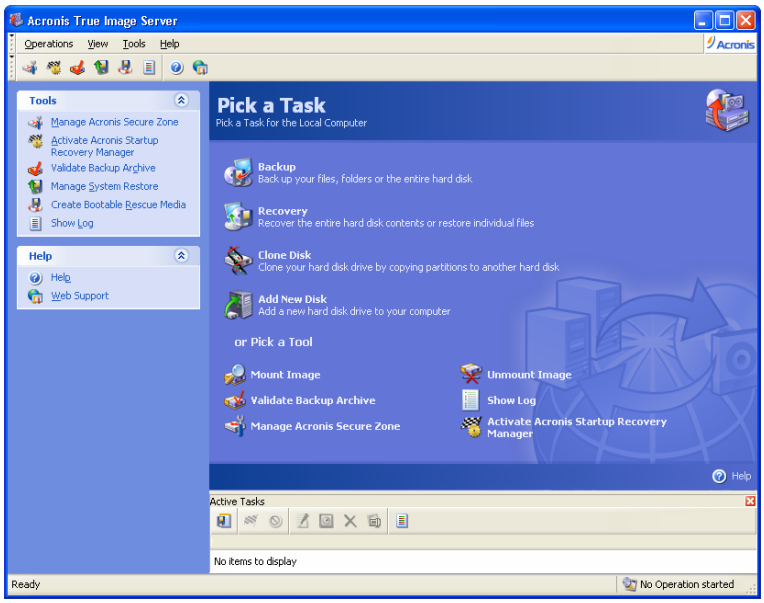
Copyright © Acronis, Inc., 2000-2006

Chapter 4. Using Acronis True Image Server for Windows

Acronis True Image Server for Windows supports the command-line mode for data backup and restore, as well as the GUI mode, and can be used to execute XML scripts. Here we describe the operations available in GUI mode, which provides more functionality. For console commands and scripting see *Chapter 14. Command-line mode and scripting*.

4.1 Main program window

The main program window contains the menu, the toolbar, the sidebar, the **Active Tasks** pane and the main area. The main area contains operation icons, while the sidebar features **Tools** and **Help** panels.



Most of the operations are represented two or even three times in different window areas, providing several ways to select them for more convenience. For example, you can start the necessary operation or tool by clicking its icon in the main area or by selecting the same item from the **Operations** or **Tools** menu.

The main window contains operation icons divided into two groups.

The **Task** group contains the following operations:

- **Backup** – create a backup archive
- **Recovery** – restore data from a previously created archive
- **Clone Disk** – transfer the OS, applications and data from the old disk to the new one
- **Add New Disk** – add a new disk for data storage leaving the OS and applications on the old one.

The **Tools** group contains the following items:

- **Mount Image** – connect a disk/partition image as a virtual drive
- **Unmount Image** – disconnect the connected virtual drive
- **Validate Backup Archive** – run the archive integrity checking procedure

Copyright © Acronis, Inc., 2000-2006

- **Show Log** – open the Log Viewer window
- **Manage Acronis Secure Zone** – create, delete and resize a special hidden partition for storing archives (Acronis Secure Zone)
- **Activate Acronis Startup Recovery Manager** – activate the boot restoration manager (F11 key).
- **Manage System Restore** – turn on/off Microsoft Windows System Restore tool and set its options directly from Acronis True Image Server for Windows

Program menu

The program menu bar features the **Operations, View, Tools** and **Help** items.

The **Operations** menu contains a list of the available operations, including scheduling tasks.

The **View** menu contains items for managing the program window look:

- **Toolbars** – contains commands that control toolbar icons
- **Common Task Bar** – enables/disables the sidebar
- **Status Bar** – enables/disables the status bar
- **Active tasks** – enables/disables the Active Tasks pane at the bottom of the main area.

The **Tools** menu contains the following items:

- **Manage Acronis Secure Zone** – create, delete and resize a special hidden partition for storing archives (Acronis Secure Zone)
- **Activate Acronis Startup Recovery Manager** – activate the boot restoration manager (F11 key)
- **Validate Backup Archive** – run the archive integrity checking procedure
- **Create Bootable Rescue Media** – run the bootable media creation procedure
- **Show Log** – open the Log Viewer window
- **Options** – open a window for editing default backup/restore options, setting text appearance (fonts), configuring email/Winpopup notifications etc.

The **Help** menu is used to invoke help and obtain information about Acronis True Image Server for Windows.

Active Tasks pane

The **Active Tasks** pane displays the scheduled and currently-being-executed tasks. It features its own toolbar. You can customize this toolbar view by right-clicking on it and selecting the desired options.

Status bar

At the bottom of the main window, there is a status bar divided into two parts. The left side briefly describes the selected operation; the right side indicates operation progress and results. If you double-click on the operation results, you will see the logs window.

Taskbar notification area icon

During most of the operations, a special indicator icon appears in the Windows taskbar notification area (the right portion of the status bar with the clock). If you mouse over the icon, you will see a tool tip indicating the operation's progress. This icon doesn't depend on the main program window being open. It is present for background execution of scheduled tasks as well.

Copyright © Acronis, Inc., 2000-2006

4.2 Available operations

You can perform the following operations.

- **Backup and restore data, including system disks/partitions**

Click **Backup** or **Recovery**, then follow the Wizard's instructions. See details in *Chapter 5. Creating backup archives* and *Chapter 6. Restoring the backup data.*

- **Schedule backup operations**

Click the very left button on a tasks pane toolbar, then follow the Wizard's instructions. See details in *Chapter 7. Scheduling tasks*.

- **Set up backup/restore options,** such as system/network resources usage, before/after backup commands etc.

Select **Tools -> Options** -> **Default backup options** or **Default restoration options** and make settings. See details in *5.3 Setting backup options* and *6.4 Setting restore options.*

- **Validate backup archives wherever they reside, be it local, network or removable media**

Click **Validate Backup Archive**, then follow the Wizard's instructions. See details in *10.1 Validating backup archives*.

- **Set up sending notifications about Acronis True Image Server for Windows operation and tracing** this operation in Windows Application Event Log

Select **Tools -> Options** -> **Notifications** or **Event tracing** and make settings. See details in *10.2 Operation results notification* and *10.4 Event tracing*.

- **Browse logs of Acronis True Image Server for Windows operation**

Click the very right button on a tasks pane toolbar at the bottom of the window. See details in *10.3 Viewing logs*.

- **Manage Acronis Secure Zone**

Click **Manage Acronis Secure Zone**, then follow the Wizard's instructions. See details in *Chapter 8. Managing Acronis Secure Zone*.

- **Activate Acronis Startup Recovery Manager**

Click **Activate Acronis Startup Recovery Manager**, then follow the Wizard's instructions. See details in *3.4 Acronis Startup Recovery Manager*.

- **Mount partitions' images to explore and modify their contents, or to restore individual files**

Click **Mount image**, then follow the Wizard's instructions. See details in *Chapter 11. Mounting an image as a virtual drive*.

- **Unmount previously mounted partition images**

Click **Unmount image**, then follow the Wizard's instructions. See details in *11.2 Unmounting an image*.

- **Transfer the system to a new hard disk**

See *Chapter 12. Transferring the system to a new disk*.

- **Format partitions on a new hard disk**

See *Chapter 13. Adding a new hard disk*.

 Copyright © Acronis, Inc., 2000-2006

- **Turn on/off Windows System Restore tool**

See *10.5 Managing System Restore*.

- **Create bootable rescue media, its ISO or RIS package**

See *Chapter 9. Creating bootable media*.

Some of the above operations can be executed in command-line as well. For more information on Acronis True Image Server for Windows command-line mode see *14.1 Working in the command-line mode*.

Copyright © Acronis, Inc., 2000-2006

Chapter 5. Creating backup archives

To be able to restore the lost data or roll back your system to a predetermined state, you should first create a data or entire-system backup file.

If you are not concerned about restoration of your operating system along with all settings and applications, but plan to keep safe only certain data (the current project, for example), choose file/folder backup. This will reduce the archive size, thus saving disk space and possibly reducing removable media costs.

Backing up the entire system disk (creating a disk image) takes more disk space but enables you to restore the system in minutes in case of severe data damage or hardware failure. Moreover, the imaging procedure is much faster than copying files, and may significantly speed the backup process when it comes to backing up large volumes of data (see details in *3.1 The difference between file archives and disk/partition images*).

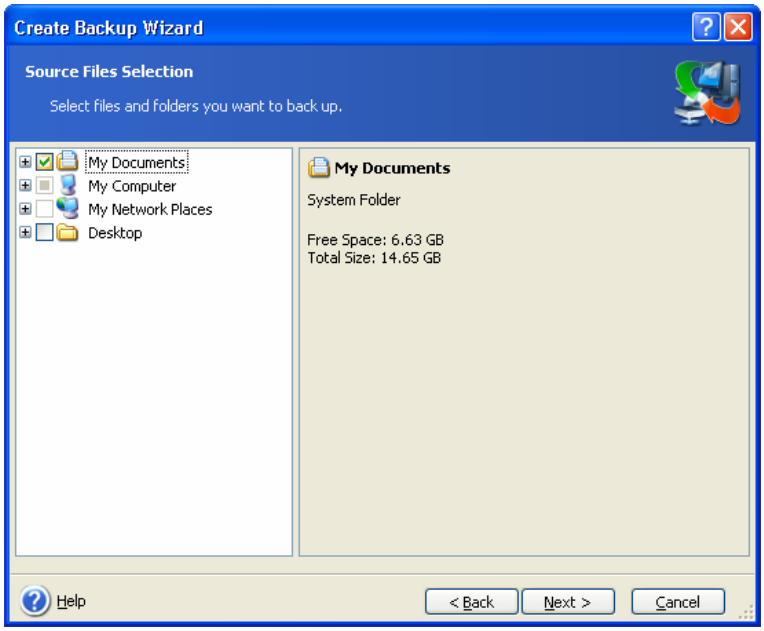
5.1 Backing up files and folders (file backup)

1. Invoke the **Create Backup Wizard** by clicking on the backup operation icon in the main program window.

2. Click **Next**.

3. Select **Backup files** and click **Next**.

4. From the tree pane, select files and folders to back up. You can select a random set of files, folders, partitions, disks and even computers.



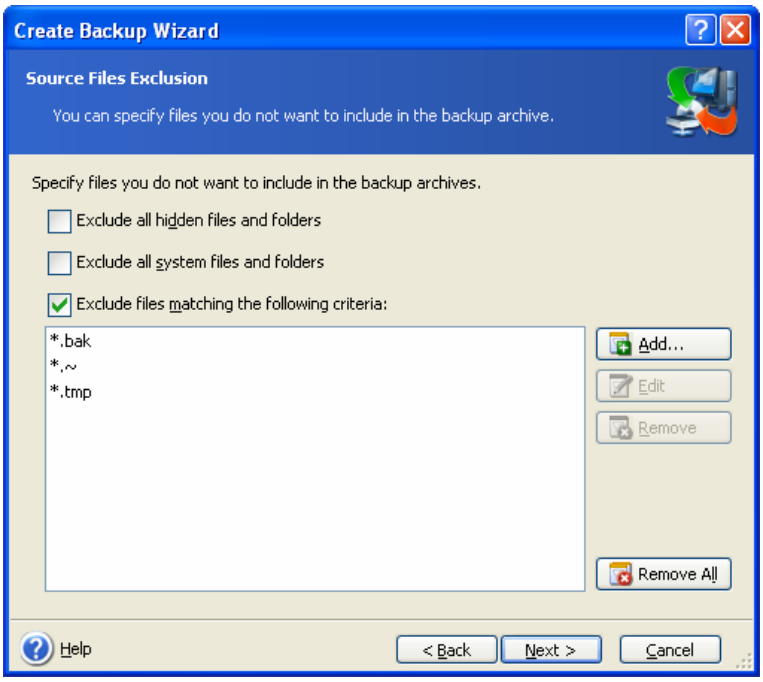
If you select a partition, disk or computer, and archive all its files, including system and hidden files, the bare-metal restore of that disk (partition, computer) still will not be possible. You also may not be able to boot the restored operating system. Therefore, it is recommended that you select only files and folders containing user data. To back up a disk or partition, use image backup.

5. Click **Next**.

Copyright © Acronis, Inc., 2000-2006

6. Set filters for the specific types of files you do not wish to back up. For example, you may want hidden and system files and folders, as well as files with **.~, .tmp and .bak** extensions, not to be stored in the archive.

You can also apply custom filters, using the common Windows masking rules. For example, to exclude all files with extension .exe, add ***.exe** mask. **My???.exe** mask will reject all .exe files with names consisting of five symbols and starting with “my”.



All of these settings will take effect for the current task. For information on how to set the default filters that will be called each time you create a file backup task, see *5.3.2 Source files exclusion*.

7. Click **Next**.

8. Select the name and location of the archive file.

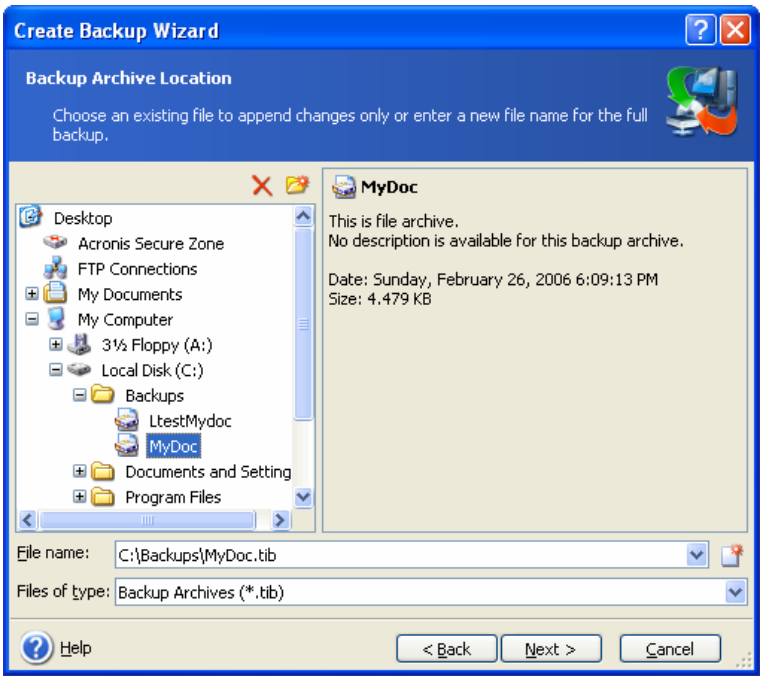
If you are going to create a full backup, type the file name in the **File Name** line, or use the file name generator (a button to the right of the line). If you select an existing archive, it will be overwritten.

If you are going to create an incremental backup (see *3.2 Full, incremental and differential backup*), select the latest full or incremental backup you have.

In fact, if all incremental backup files are stored together, it doesn't matter which one you select, as the program will recognize them as a single archive. If you stored the files on several removable disks, you must provide the latest archive file; otherwise, restoration problems might occur.

If you are going to create a differential backup, select the full backup which will be a base, or any of the existing differential archives. Either way, the program will create a new differential archive file.

Copyright © Acronis, Inc., 2000-2006



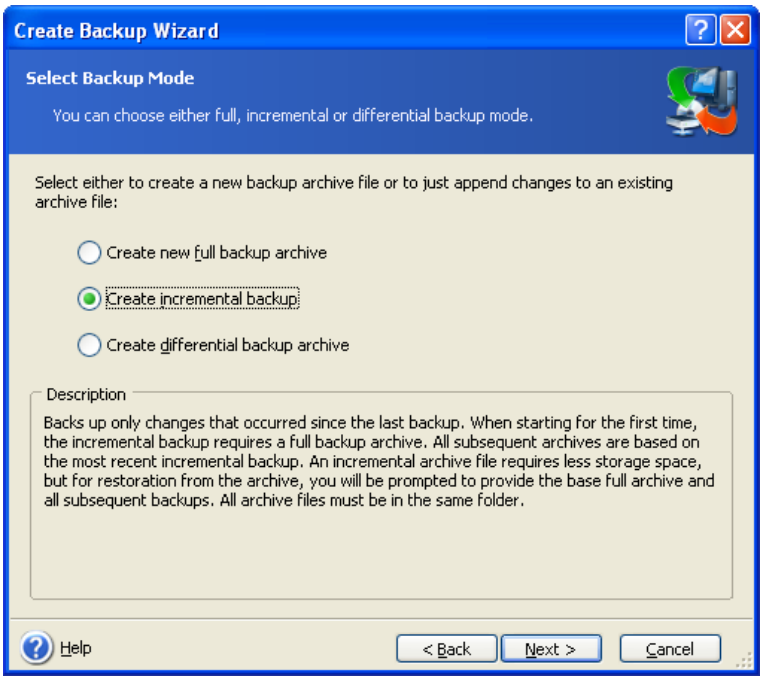
The “farther” you store the archive from the original folders, the safer it will be in case of data damage. For example, saving the archive to another hard disk will protect your data if the primary disk is damaged. Data saved to a network disk, ftp-server or removable media will survive even if all your local hard disks are down. You can also use Acronis Secure Zone (see details in *3.3 Acronis Secure Zone*) for storing backups. In that case, you need not provide the file name.

An FTP server must allow passive mode for file transfers. To enable data recovery directly from an FTP server, split the archive into files no more than 2 GB in size.

9. Click **Next**.

10. Select whether you want to create a full, incremental or differential backup. If you have not backed up the selected files/folders yet, or the full archive seems too old to append incremental changes to it, choose full backup. Otherwise it is recommended that you create an incremental or differential backup (see *3.2 Full, incremental and differential backup*).

Copyright © Acronis, Inc., 2000-2006


Create Backup Wizard
Select Backup Mode
You can choose either full, incremental or differential backup mode.
Select either to create a new backup archive file or to just append changes to an existing archive file:
Create new full backup archive
Create incremental backup
Create differential backup archive
Description
Backs up only changes that occurred since the last backup. When starting for the first time, the incremental backup requires a full backup archive. All subsequent archives are based on the most recent incremental backup. An incremental archive file requires less storage space, but for restoration from the archive, you will be prompted to provide the base full archive and all subsequent backups. All archive files must be in the same folder.
Help
< Back
Next >
Cancel

11. Click **Next**.

12. Select the backup options (that is, backup file splitting, compression level, password protection, pre/post backup commands etc.). You may **Use default options** or **Set the options manually**. If the latter is the case, the settings will be applied only to the current backup task. Alternatively, you can edit the default options from the current screen. Then your settings will be saved as the defaults. See *5.3 Setting backup options* for more information.

13. Click **Next**.

14. Provide a comment for the archive. This can help prevent you from restoring the wrong files. However, you can choose not to make any notes. The backup file size and creation date are automatically appended to the description, so you do not need to enter this information.

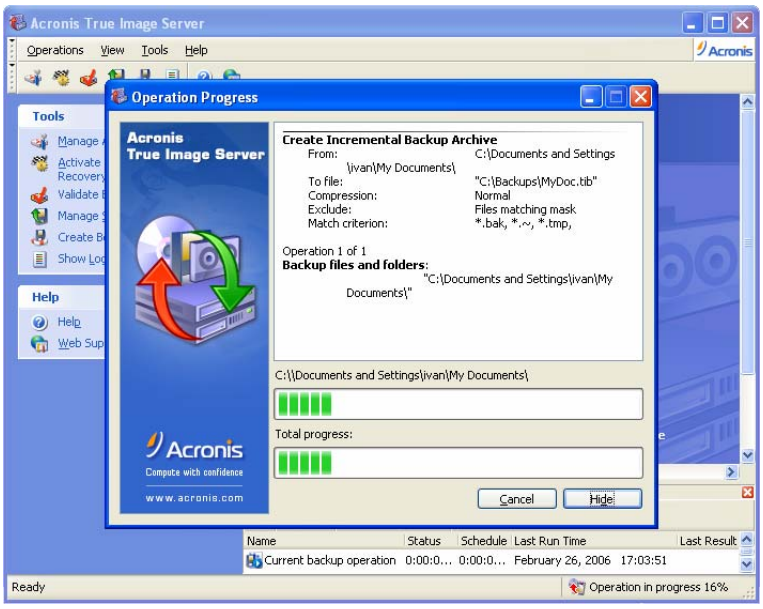
15. Click **Next**.

16. At the final step, the backup task summary is displayed. Up to this point, you can click **Back** to make changes in the created task. Clicking **Proceed** will launch the task execution.

17. The task will appear on the **Active tasks** pane of the main window. The task progress will be shown in a special window. You can stop the procedure by clicking **Cancel**.

You can also close the progress window by clicking **Hide**. The backup creation will continue, but you will be able to start another operation or close the main program window. In the latter case, the program will continue working in the background and will automatically close once the backup archive is ready. If you prepare some more backup operations, they will be queued after the current one.

Copyright © Acronis, Inc., 2000-2006



You may want to adjust the backup process priority. To do so, click on the process icon in the System Tray and select Low, Normal, or High priority from the menu that appears. For information on how to set the default priority, see *5.3.6 Backup performance*.

If you burn an archive to several removable media, be sure to number them, since you will have to insert them in order during the restoration.

18. You may want to see the log when the task is completed. To view the log, click the **Show Operation Logs** button on the toolbar.

5.2 Backing up disks and partitions (image backup)

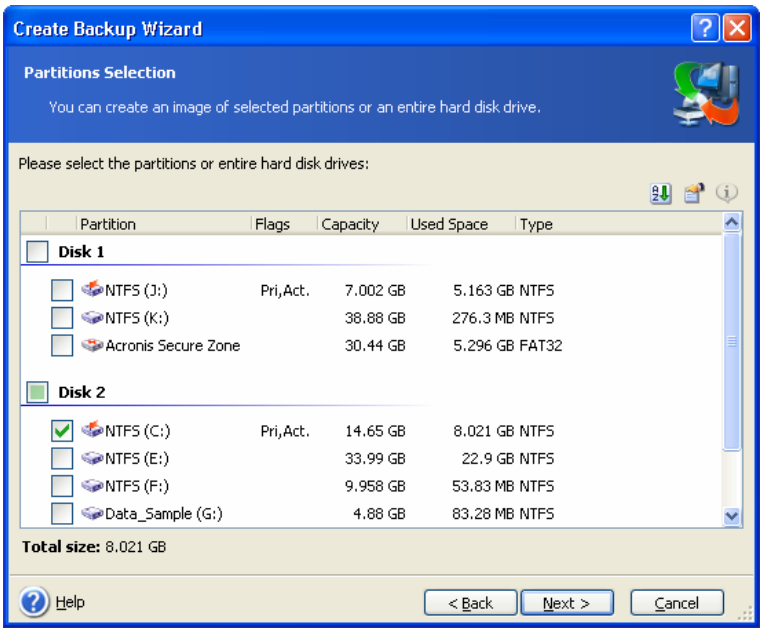
1. Invoke the **Create Backup Wizard** by clicking on the backup operation icon in the main program window.

2. Click **Next**.

3. Select **Backup disks** and click **Next**.

4. Select disks or partitions to back up. You can select a random set of disks and partitions.

Copyright © Acronis, Inc., 2000-2006


Create Backup Wizard
Partitions Selection
You can create an image of selected partitions or an entire hard disk drive.
Please select the partitions or entire hard disk drives:
Partition
Flags
Capacity
Used Space
Type
Disk 1
NTFS (J:) Pri,Act. 7.002 GB 5.163 GB NTFS
NTFS (K:) 38.88 GB 276.3 MB NTFS
Acronis Secure Zone 30.44 GB 5.296 GB FAT32
Disk 2
NTFS (C:) Pri,Act. 14.65 GB 8.021 GB NTFS
NTFS (E:) 33.99 GB 22.9 GB NTFS
NTFS (F:) 9.958 GB 53.83 MB NTFS
Data_Sample (G:) 4.88 GB 83.28 MB NTFS
Total size: 8.021 GB
Help
< Back
Next >
Cancel

5. Click **Next**.

6. Select the name and location of the archive file.

If you are going to create a full archive, type the file name in the **File Name** line, or use the file name generator (a button to the right of the line). If you select an existing archive, it will be overwritten.

If you are going to create an incremental backup (see *3.2 Full, incremental and differential backup*), select the latest full or incremental backup you have.

In fact, if all incremental backup files are stored together, it doesn't matter which one you select, as the program will recognize them as a single archive. If you stored the files on several removable disks, you must provide the latest archive file; otherwise, restoration problems might occur.

If you are going to create a differential backup, select the full backup which will be a base, or any of existing differential archives. Either way, the program will create a new differential archive file.

The “farther” you store the archive from the original partition, the safer it will be in case of data damage. For example, saving the archive to another hard disk will protect your data if your primary disk is damaged. Data saved to a network disk, ftp-server or removable media will survive even if all your local hard disks are down. You can also use Acronis Secure Zone (see details in *3.3 Acronis Secure Zone*) for storing backups. In that case, you need not provide the file name.

An FTP server must allow passive mode for file transfers. To enable data recovery directly from FTP server split the archive to files no more than 2 GB in size.

7. Click **Next**.

8. Select whether you want to create a full or incremental backup. If you have not backed up the selected disks/partitions yet, or the full archive seems too old to append incremental changes to it, choose full backup. Otherwise it is recommended that you create an incremental or differential backup (see *3.2 Full, incremental and differential backup*).

9. Click **Next**.

Copyright © Acronis, Inc., 2000-2006

10. Select the backup options (that is, backup file splitting, compression level, password protection, pre/post backup commands etc.). You may **Use default options** or **Set the options manually**. If the latter is the case, the settings will be applied only to the current backup task. Alternatively, you can edit the default options from the current screen. Then your settings will be saved as the defaults. See *5.3 Setting backup options* for more information.

11. Click **Next**.

12. Provide a comment for the archive. This can help prevent you from restoring the wrong disk/partition. However, you can choose not to make any notes. The backup file size and creation date are automatically appended to the description, so you do not need to enter this information.

13. Click **Next**.

14. At the final step, the backup task summary is displayed. Up to this point, you can click **Back** to make changes in the created task. Clicking **Proceed** will launch the task execution.

15. The task will appear on the **Active tasks** pane of the main window. The task progress will be shown in a special window. You can stop the procedure by clicking **Cancel**.

You can also close the progress window by clicking **Hide**. The backup creation will continue, but you will be able to start another operation or close the main program window. In the latter case, the program will continue working in the background and will automatically close once the backup archive is ready. If you prepare some more backup operations, they will be queued after the current.

You may want to adjust the backup process priority. To do so, click on the process icon in the System Tray and select Low, Normal, or High priority from the menu that appears. For information on how to set the default priority, see *5.3.6 Backup performance*.

If you burn an archive to several removable media, be sure to number them, since you will have to insert them in order during the restoration.

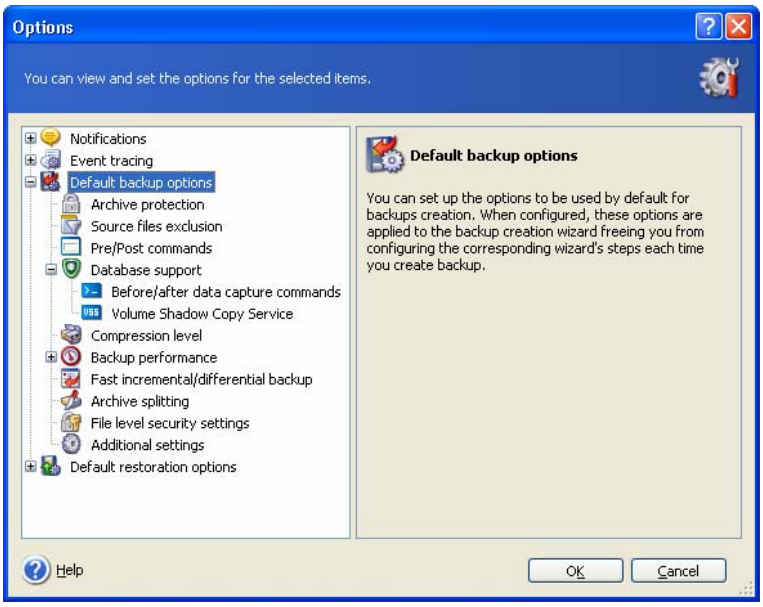
16. You may want to see the log when the task is completed. To view the log, click the **Show Operation Logs** button on the toolbar.

5.3 Setting backup options

To view or edit the default backup options, select **Tools -> Options -> Default Backup Options** from the main program menu.

You can edit the default (or set the temporary) backup options while creating a backup task as well.

Copyright © Acronis, Inc., 2000-2006


Options
You can view and set the options for the selected items.
Notifications
Event tracing
Default backup options
Archive protection
Source files exclusion
Pre/Post commands
Database support
Before/after data capture commands
Volume Shadow Copy Service
Compression level
Backup performance
Fast incremental/differential backup
Archive splitting
File level security settings
Additional settings
Default restoration options
Default backup options
You can set up the options to be used by default for backups creation. When configured, these options are applied to the backup creation wizard freeing you from configuring the corresponding wizard's steps each time you create backup.
Help
OK
Cancel

5.3.1 Archive protection

The default setting – **no password**.

An archive can be protected with a password. To protect the archive from being restored by anybody except you, enter a password and its confirmation into the text fields. A password should consist of at least eight symbols and contain both letters (in the upper and lower cases preferably) and numbers to make it more difficult to guess.

If you try to restore data from a password-protected archive, or append an incremental/differential backup to such an archive, Acronis True Image Server for Windows will ask for the password in a special window, allowing access only to authorized users.

5.3.2 Source files exclusion

The default setting – **all files from the selected folders will be included into the archive**.

You can set default filters for the specific types of files you do not wish to back up. For example, you may want hidden and system files and folders, as well as files with **.~, .tmp and .bak** extensions, not to be stored in the archive.

You can also apply custom filters, using the common Windows masking rules. For example, to exclude all files with extension .exe, add ***.exe** mask. **My???.exe** mask will reject all .exe files with names consisting of five symbols and starting with “my”.

This option is effective for file/folders backup only. When creating a disk/partition image, you cannot filter out any files.

5.3.3 Pre/post commands

You can specify commands or batch files to be automatically executed before and after the *backup procedure*. For example, you may want to remove some tmp files from the disk before starting backup or configure a third-party antivirus product to be started each time before the backup starts. Click **Edit** to open the **Edit Command** window where you can easily input the command, its arguments and working directory or browse folders to find a batch file.

Copyright © Acronis, Inc., 2000-2006

Unchecking the **Do not perform operations until the commands execution is complete** box, checked by default, will permit the backup process to run concurrently with your commands execution.

5.3.4 Database support

Database servers, such as MS SQL Server and MS Exchange, prove to be troublesome to backup, partially due to open files and indexes and partially due to rapid data changes. Therefore it is usually recommended that the database be suspended just before the backup (data capture) moment. Provided all transactions are completed by the moment of data capture, the database, when recovered, will be ready to access immediately after recovery.

1. Volume Shadow Copy Service

Microsoft Volume Shadow Copy Service (VSS) provides the infrastructure for backup on running systems by keeping up coordination between user applications that update data on disk and backup applications. VSS is available in Microsoft Windows XP and Microsoft Windows Server 2003 operating systems.

If your database is compatible with **Microsoft Volume Shadow Copy Service (VSS)**, then checking the **Enable VSS support** box in **Database support** window will ensure completion of all transactions before the backup process starts. The examples of VSS-aware databases are Exchange, Oracle, SQL Server.

2. Before/after data capture commands

However, VSS is not available in server operation systems older than **Windows 2003 Server**, and not all databases support VSS. In these cases, the transactions completion can be ensured with executing batch files or scripts that pause the appropriate Windows services and automatically resume them after data capture.

An example of a batch file, suspending the Windows services for MS Exchange:

```
net stop msexchangesa /y /y
net stop "Microsoft Exchange Routing Engine"
```

An example of a batch file, resuming the Windows services for MS Exchange:

```
net start "Microsoft Exchange System Attendant"
net start "Microsoft Exchange Event"
net start "Microsoft Exchange IMAP4"
net start "Microsoft Exchange MTA Stacks"
net start "Microsoft Exchange POP3"
net start "Microsoft Exchange Routing Engine"
```

Create batch files in any text editor (for example, name it 'pause_services.bat' and 'resume_services.bat'). Use **Edit** buttons to the right of **Before data capture command** and **After data capture command** fields, to open the **Edit Command** window where you can browse folders to find the respective batch files or scripts. A single command can be specified in the same window along with its arguments and working directory.

It is critical to note that these commands, as opposed to **Backup commands** above, will be executed before and after *data capture* process, which takes seconds, while the entire backup procedure may take quite long time. Therefore, the database idle time will be minimal.

 Copyright © Acronis, Inc., 2000-2006

Before/after data capture commands can also be used for purposes different from suspending the database, especially if VSS support is enabled. You may want to suspend an application other than a database, for example. The commands execution and the VSS actions will be sequenced as follows:

"before" commands -> VSS Suspend -> data capture -> VSS Resume -> "after" commands.

Unchecking the **Do not perform operations until the commands execution is complete** box, checked by default, will permit the backup process to run concurrently with your commands execution.

5.3.5 Compression level

The default setting – **Normal**.

If you select **None**, the data will be copied without any compression, which may significantly increase the backup file size. However, if you select **Maximum** compression, the backup will take longer to create.

The optimal data compression level depends on the type of files stored in the archive. For example, even maximum compression will not significantly reduce the archive size if the archive contains essentially compressed files, like .jpg, .pdf or .mp3.

Generally, it is recommended that you use the default **Normal** compression level. You might want to select **Maximum** compression for removable media to reduce the number of blank disks required.

5.3.6 Backup performance

The three options below might have a more or less noticeable effect on the backup process speed. This depends on overall system configuration and physical characteristics of devices.

1. Backup process priority

The default setting – **Low**.

The priority of any process running in a system determines the amount of CPU usage and system resources allocated to that process. Decreasing the backup priority will free more resources for other CPU tasks. Increasing the backup priority may speed up the backup process due to taking resources from the other currently running processes. The effect will depend on total CPU usage and other factors.

2. HDD writing speed

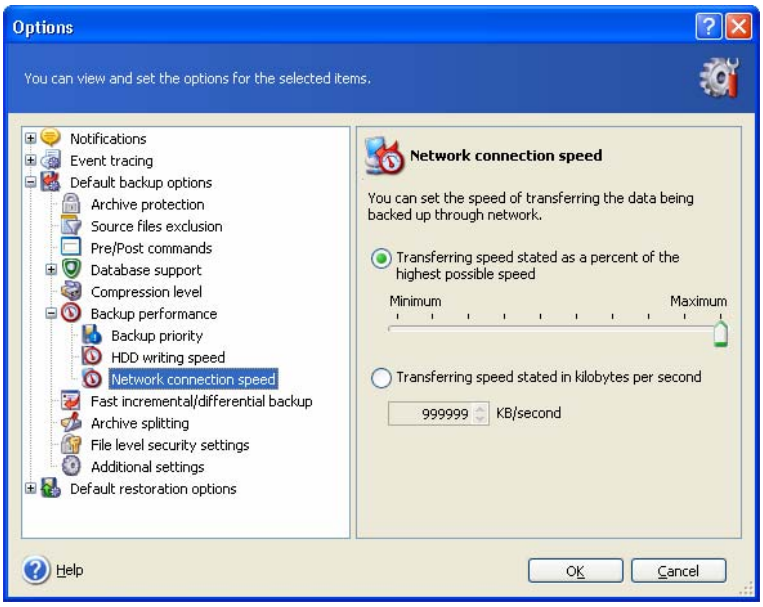
The default setting – **Maximum**.

Backing up in the background to an internal hard disk (for example, to Acronis Secure Zone) may slow other programs' performance because of the large amounts of data transferred to the disk. You can limit the hard disk usage by Acronis True Image Server for Windows to a desired level. To set the desired HDD writing speed for data being backed up, drag the slider or enter the writing speed in kilobytes per second.

3. Network connection speed

The default setting – **Maximum**.

Copyright © Acronis, Inc., 2000-2006



If you frequently backup data to network drives, think of limiting the network usage used by Acronis True Image Server for Windows. To set the desired data transfer speed, drag the slider or enter the bandwidth limit for transferring backup data in kilobytes per second.

5.3.7 Fast incremental/differential backup

The default setting – **Use fast incremental/differential backup**.

Incremental/differential backup captures only changes in data occurred since the last backup. To speed up the backup process, Acronis True Image Server for Windows determines whether the file has changed by file size and the date/time when the file was last saved. Disabling this feature will make the program compare the entire file contents to that stored in the archive.

This option relates only to disk/partition (image) backup.

5.3.8 Archive splitting

Sizeable backups can be split into several files that together make the original backup. A backup file can be split for burning to removable media or saving on an FTP server (data recovery directly from an FTP server requires the archive to be split into files no more than 2 GB in size).

The default setting – **Automatic**. With this setting, Acronis True Image Server for Windows will act as follows.

When backing up to the hard disk: If the selected disk has enough space and its file system allows the estimated file size, the program will create a single archive file.

If the storage disk has enough space, but its file system does not allow the estimated file size, Acronis True Image Server for Windows will automatically split the backup into several files.

FAT16 and FAT32 file systems have a 4 GB file size limit. At the same time, the existing hard drive's capacity may reach as much as 2 TB. Therefore, an archive file might easily exceed this limit, if you are going to back up the entire disk.

If you do not have enough space to store the image on your hard disk, the program will warn you and wait for your decision as to how you plan to fix the problem. You can try to free some additional space and continue or click **Back** and select another disk.

Copyright © Acronis, Inc., 2000-2006

When backing up to a diskette, CD-R/RW or DVD±R/RW: Acronis True Image Server for Windows will ask you to insert a new disk when the previous one is full.

Alternatively, you can select **Fixed size** and enter the desired file size or select it from the drop-down list. The backup will then be split into multiple files of the specified size. That comes in handy when backing up to a hard disk with a view to burning the archive to CD-R/RW or DVD±R/RW later on.

Creating images directly on CD-R/RW or DVD±R/RW might take considerably more time than it would on a hard disk.

5.3.9 File-level security settings

Preserve files' security settings in archives

By default, files and folders are saved in the archive with their original Windows security settings (i.e. permissions for read, write, execute and so on for each user or user group, set in file **Properties -> Security**). If you restore a secured file/folder on a computer without user, specified in the permissions, you may not be able to read or modify this file.

To completely eliminate this kind of problem, you can disable preserving files' security settings in archives. Then the restored files/folders will always inherit the permissions from the folder to which they are restored (parent folder or disk, if restored to the root).

Alternatively, you can disable files' security settings during restoration, even if they are available in the archive (see *6.4.5 File-level security* settings below). The result will be the same.

In archives, store encrypted files in decrypted state

The default setting – **disabled**.

If you do not use the encryption feature available in Windows 2003 Server and Windows XP operating systems, simply ignore this option. (Files/folders encryption is set in **Properties -> General -> Advanced Attributes -> Encrypt contents to secure data**).

Check the option if there are encrypted files in the backup and you want them to be accessed by any user after restore. Otherwise, only the user who encrypted the files/folders will be able to read them. Decryption may also be useful if you are going to restore encrypted files on another computer.

These options relate only to file/folders backup.

5.3.10 Media components

The default setting – **disabled**.

When backing up to removable media, you can make this media bootable by writing to it additional components. Thus, you will not need a separate rescue disk.

Choose the basic components, necessary for boot and restoring data, on the **General** tab.

The **Acronis One-Click Restore** is a minimal addition to your rescue media, allowing one-click disk recovery from an image archive, stored on this media. This means that at boot from the media and clicking "restore" all the data contained in the image will be silently restored.

Because one-click approach does not imply user selections, like selecting partitions to restore, Acronis One-Click Restore always restores the entire disk. Therefore, if your disk consists of several partitions and you are planning to use Acronis One-Click Restore, all the

partitions must be included into the image. Any partitions which are missing from the image will be lost.

If you want more functionality during restoration, write a standalone version of **Acronis True Image Server for Windows** to the rescue disk. Then you will be able to configure the restore task using Restore Data Wizard, use Acronis Snap Restore or Acronis Universal Restore etc.

Under **Advanced** tab you can select full, safe or both Acronis True Image Server for Windows loader version. The safe version does not have USB, PC card or SCSI drivers and is useful only in case the full version does not load. If you have other Acronis products, such as Acronis Disk Director Suite, installed on your computer, the bootable versions of these programs' components will be offered as **Advanced** as well.

In case you check **Do not place additional components if there is no free space** box, the program will try to write at least Acronis True Image Server for Windows to media, short of space.

5.3.11 Additional settings

1. Validate backup archive upon operation completion

The default setting – **disabled**.

You can choose to check the backup data integrity. Verification will be performed immediately after the archive is created.

To check data from an incremental backup, you must have all previous incremental backup files and the initial full backup. If any of successive backups is missing, validation is not possible.

To check data from a differential backup, you must have the initial full backup as well.

However, if you created several differential or both incremental and differential backups based on the same full backup (and therefore, in the same folder), you will need ALL of these successive backups to validate the archive.

2. Overwrite data on a tape without user confirmation

The default setting – **disabled**.

A full backup, when created on a tape drive, overwrites all data stored on the tape (see *3.8 Backing up to tape drive* for more information). In this situation, Acronis True Image Server for Windows will warn that you are about to lose data on the tape. To disable this warning, check the middle box.

3. Ask for first media while creating backup archives on removable media

The default setting – **enabled**.

You can choose whether to display the **Insert First Media** prompt when backing up to removable media. With the default setting, backing up to removable media may be not possible if the user is away, because the program will wait for pressing **OK** in the prompt box. Therefore, you should disable the prompt when scheduling a backup to removable media. Then, if the removable media is available (for example, CD-R/RW inserted) the task can run unattended.

 Copyright © Acronis, Inc., 2000-2006

Chapter 6. Restoring the backup data

6.1 Restore under Windows or boot from CD?

As mentioned above (see *2.3 Running Acronis True Image Server* for Windows), Acronis True Image Server for Windows can be run in several ways. We recommend that you first try to restore data running Acronis True Image Server for Windows under Windows, because this method provides more functionality. Boot from the bootable media or use the Startup Recovery Manager (see *3.4 Acronis Startup Recovery Manager)* only if Windows does not load.

The boot CD from which you loaded the program does not keep you from using other CDs with backups. Acronis True Image Server for Windows is loaded entirely into RAM, so you can remove the bootable CD to insert the archive disk.

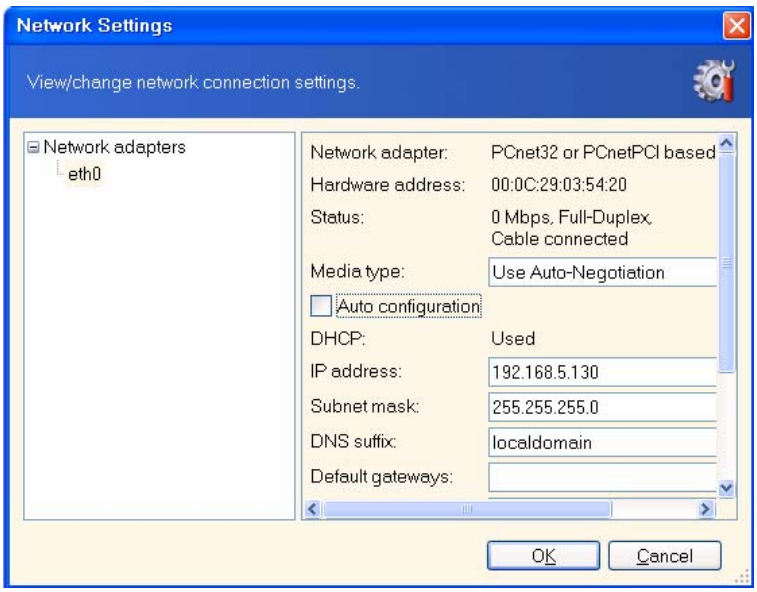
Be careful! Disk letters in standalone Acronis True Image Server for Windows might sometimes differ from the way Windows identifies drives. For example, the D: drive identified in the standalone Acronis True Image Server for Windows might correspond to the E: drive in Windows.

If a backup image is located on bootable media, you might have a choice of using Acronis One-Click Restore. This operation always restores the entire physical disk. Therefore, if your disk consists of several partitions, all of them must be included into the image. Any partitions which are missing from the image will be lost. Please make sure that the image contains all disk data or you do not need the partitions that are not imaged before using Acronis One-Click Restore. For more information on Acronis One-Click Restore see **Error! Reference source not found.**.

6.1.1 Network settings in rescue mode

When booted from removable media, RIS server or by Startup Recovery Manager, Acronis True Image Server for Windows may not detect the network. Such might be the case if there is no DHCP server in your network or your computer address was not identified automatically for some reason.

To enable connection, specify network settings manually in the window, available at **Tools -> Options -> Network adapters.**



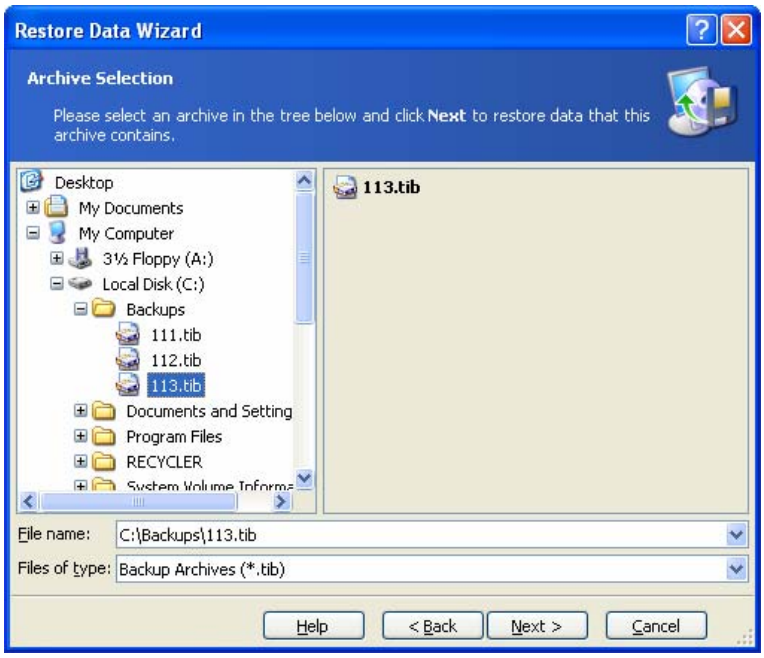
6.2 Restoring files and folders from file archives

Here we describe how to restore file/folders from a file backup archive. You can restore the desired files/folders from a disk/partition image as well. To do so, mount the image (see *Chapter 11. Mounting an image as a virtual drive*) or start the image restoration and select **Restore specified files or folders** (see *6.3 Restoring disks/partitions or files from images*).

1. Invoke the **Restore Data Wizard** by clicking on the restore operation icon in the main program window.

2. Click **Next**.

3. Select the archive. If the archive is located in Acronis Secure Zone, select it to choose the archive on the next step.



If the archive is located on removable media, e.g. CD, first insert the last CD and then insert disks in reverse order when Restore Data Wizard prompts.

Data recovery directly from an FTP server requires the archive to consist of files no more than 2 GB in size. If you suspect that some of the files may be larger, first copy the entire archive (along with the initial full backup) to a local hard disk or network share disk.

If you added a comment to the archive, it will be displayed to the right of the drives tree. If the archive was protected with a password, Acronis True Image Server for Windows will ask for it. The comment and the **Next** button will be unavailable until you enter the correct password.

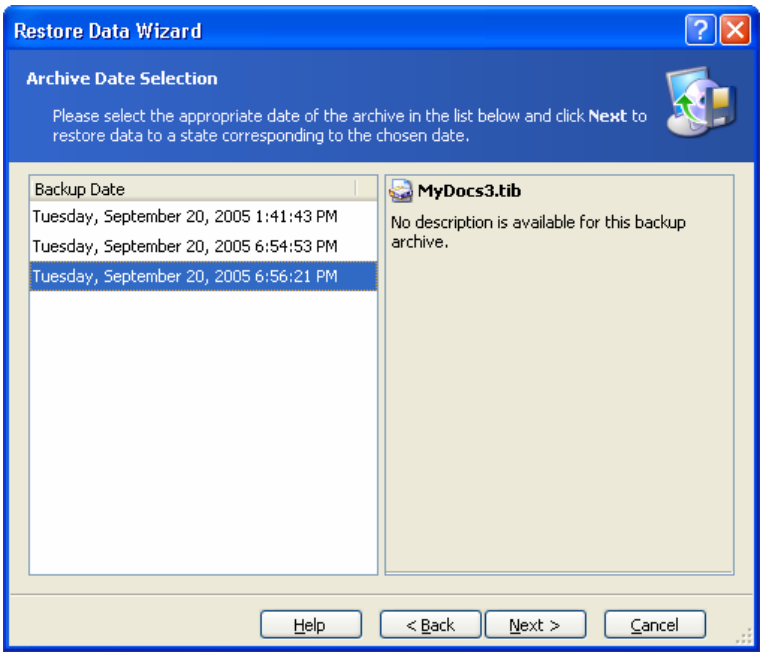
4. Click **Next**.

5. If you are to restore files from an archive, containing incremental backups, Acronis True Image Server for Windows will suggest that you select one of successive incremental backups by date/time of its creation. Thus, you can roll back the files/folders state to a certain date.

To restore data from an incremental backup, you must have all previous incremental backup files and the initial full backup. If any of successive backups is missing, restoration is not possible.

 Copyright © Acronis, Inc., 2000-2006

To restore data from a differential backup, you must have the initial full backup as well.

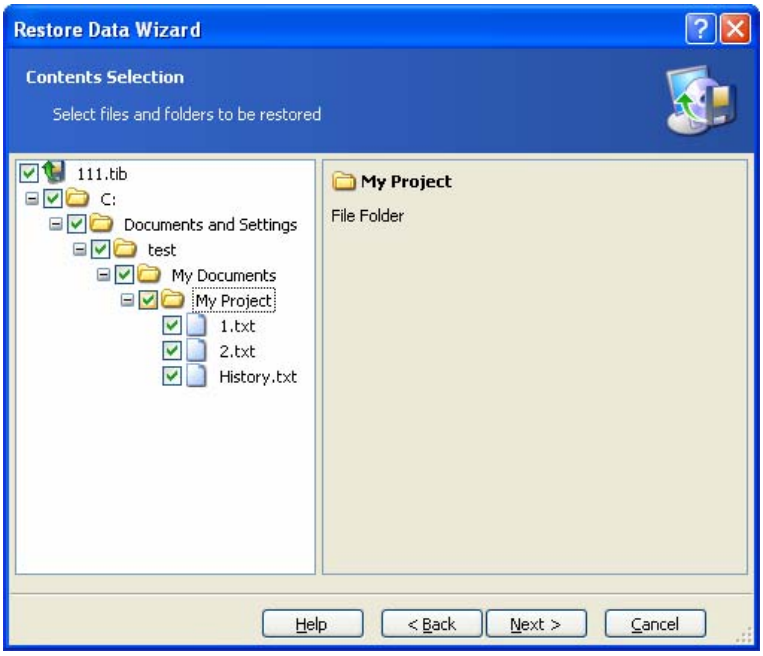

Restore Data Wizard
Archive Date Selection
Please select the appropriate date of the archive in the list below and click Next to restore data to a state corresponding to the chosen date.
Backup Date
Tuesday, September 20, 2005 1:41:43 PM
Tuesday, September 20, 2005 6:54:53 PM
Tuesday, September 20, 2005 6:56:21 PM
MyDocs3.tib
No description is available for this backup archive.
Help
< Back
Next >
Cancel

6. Click **Next**.

7. Select a folder on your computer where you want to restore selected folders/files (a target folder). You can restore data to their original location or choose another folder, if necessary.

8. Click **Next**.

9. Select files and folders to restore. You can choose to restore all data or browse the archive contents and select the desired folders or files.



10. Click **Next**.

11. Select the options for the restoration process (that is, pre/post restoration commands, restoration process priority, file-level security settings etc.). You may **Use default options** or **Set the options manually**. If the latter is the case, the settings will be applied only to the current restore task. Alternatively, you can edit the default options from the current

screen. Then your settings will be saved as default. See *6.4 Setting restore options* for more information.

12. Click **Next**.

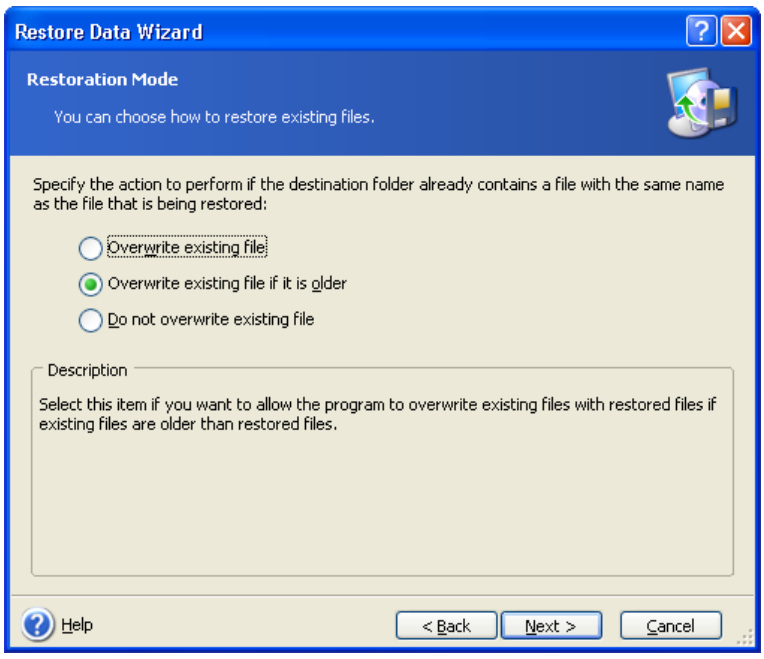
13. Set filters for the specific types of files that are not to be restored. For example, you may want hidden and system files and folders, as well as files with **.~, .tmp and .bak** extensions, not to be restored from the archive.

You can also apply custom filters, using the common Windows masking rules. For example, to exclude all files with extension .exe, add ***.exe** mask. **My???.exe** mask will reject all .exe files with names consisting of five symbols and starting with "my".

All of these settings will take effect for the current task. How to set the default filters that will be called each time you restore data, see *6.4.1 Files to exclu*.

14. Click **Next**.

15. The next selection allows you to keep useful data changes made since the selected backup was created. Choose what to do if the program finds in the target folder a file with the same name as in the archive.


Restore Data Wizard
Restoration Mode
You can choose how to restore existing files.
Specify the action to perform if the destination folder already contains a file with the same name as the file that is being restored:
Overwrite existing file
Overwrite existing file if it is older
Do not overwrite existing file
Description
Select this item if you want to allow the program to overwrite existing files with restored files if existing files are older than restored files.
Help
< Back
Next >
Cancel

Overwrite existing file – this will give the archived file unconditional priority over the file on the hard disk.

Overwrite existing file if it is older – this will give the priority to the most recent file modification, whether it be in the archive or on the disk

Do not overwrite existing file – this will give the file on the hard disk unconditional priority over the archived file.

16. At the final step, the restoration summary is displayed. Up to this point, you can click **Back** to make changes in the created task. Clicking **Proceed** will launch the task execution.

17. The task will appear on the **Active tasks** pane of the main window. The task progress will be shown in a special window. You can stop the procedure by clicking **Cancel**. Please keep in mind that the aborted procedure still may cause changes in the destination folder.

Copyright © Acronis, Inc., 2000-2006

6.3 Restoring disks/partitions or files from images

To restore a partition (disk) from an image, Acronis True Image Server for Windows must obtain **exclusive access** to the target partition (disk). This means no other applications can access it at that time. If you receive a message stating that the partition (disk) can not be blocked, close applications that use this partition (disk) and start over. If you can not determine which applications use the partition (disk), close them all.

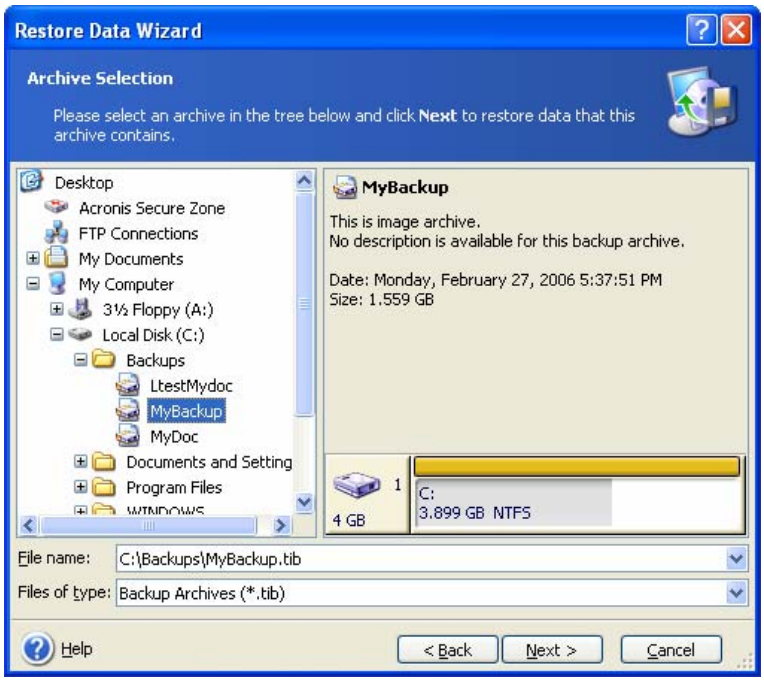
6.3.1 Starting the Restore Data Wizard

1. Invoke the **Restore Data Wizard** by clicking on the restore operation icon in the main program window.

2. Click **Next**.

6.3.2 Archive selection

1. Select the archive. If the archive is located in Acronis Secure Zone, select it to choose the archive at the next step.



If the archive is located on removable media, e.g. CD, first insert the last CD and then insert disks in reverse order when Restore Data Wizard prompts.

Data recovery directly from an FTP server requires the archive to be split into files no more than 2 GB in size. If you suspect that some of the files may be larger, first copy the entire archive (along with the initial full backup) to a local hard disk or network share disk.

If you added a comment to the archive, it will be displayed to the right of the drives tree. If the archive was protected with a password, Acronis True Image Server for Windows will ask for it. The partitions layout, the comment and the **Next** button will be unavailable until you enter the correct password.

2. Click **Next**.

3. If you are to restore data from an archive containing incremental backups, Acronis True Image Server for Windows will suggest that you select one of successive incremental

Copyright © Acronis, Inc., 2000-2006

backups by its creation date/time. Thus, you can roll back the disk/partition state to a certain date.

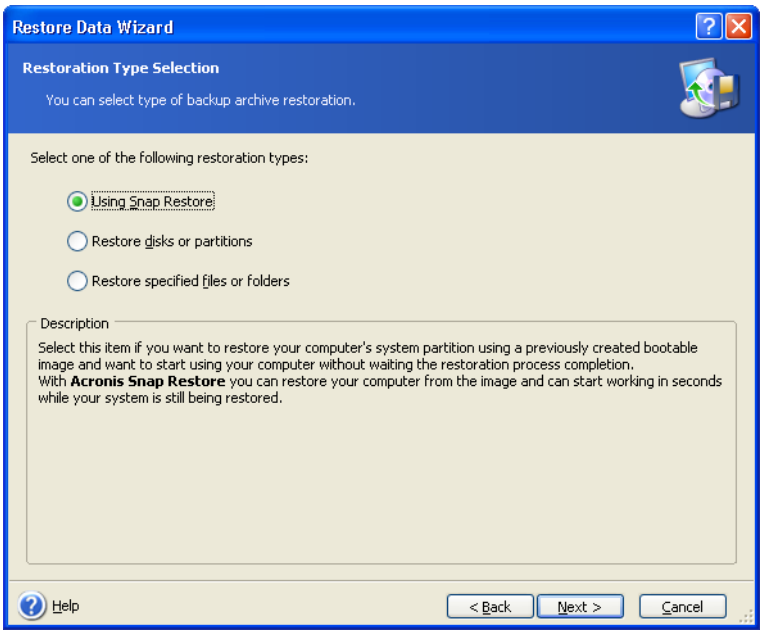
To restore data from an incremental backup, you must have all previous incremental backup files and the initial full backup. If any of successive backups is missing, restoration is not possible.

To restore data from a differential backup, you must have the initial full backup as well.

4. Click **Next**.

6.3.3 Restoration type selection

1. Select what you want to restore:


Restore Data Wizard
Restoration Type Selection
You can select type of backup archive restoration.
Select one of the following restoration types:
Using Snap Restore
Restore disks or partitions
Restore specified files or folders
Description
Select this item if you want to restore your computer's system partition using a previously created bootable image and want to start using your computer without waiting the restoration process completion.
With Acronis Snap Restore you can restore your computer from the image and can start working in seconds while your system is still being restored.
Help
< Back
Next >
Cancel

Restore specified files or folders

With this selection, you will be further offered to select where to restore selected folders/files (original or new location), choose files/folders to be restored and so on. These steps look like those in file archive restore. However, watch your selection: if you are to restore files instead of disk/partition, uncheck the unnecessary folders. Otherwise you will restore a lot of excessive files. Then you will be taken directly to Restoration Summary screen (*6.3.13 Restoration summary and executing restoration*).

Restore disks or partitions

Having selected a usual way of disks/partitions recovery, you will have to make all settings described below.

Using Snap Restore

When restoring a system disk/partition image from Acronis Secure Zone, you will have the third choice – to use **Acronis Snap Restore**. Having selected this option, you will proceed directly to the summary window (*6.3.13 Restoration summary and executing restoration*). In a few seconds after pressing **Proceed** the computer will reboot to the restored system. Log in and start work – no more reboots or other actions are required. For more about Acronis Snap Restore, see *3.5 Acronis Snap Restore*.

When performing Snap Restore, the current Acronis True Image Server for Windows version always restores the entire system disk. Therefore, if your system disk consists of several partitions and you are planning to use Acronis Snap Restore, all partitions must be included

 Copyright © Acronis, Inc., 2000-2006

into the image. Any partitions which are missing from the image will be lost.

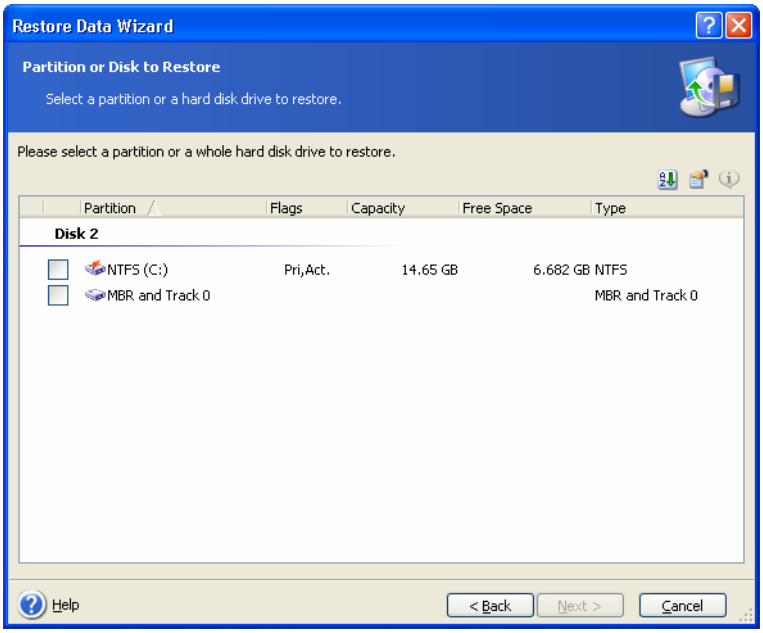
However, you can choose an ordinary way of restoration for that image. This will allow you to make changes to the restored partition that would not be possible when using Acronis Snap Restore.

Finally, if you are not going to recover the system, but only want to repair damaged files, select **Restore specified files or folders**.

2. Click **Next**.

6.3.4 Selecting a disk/partition to restore

1. The selected archive file can contain images of several partitions or even disks. Select which disk/partition to restore.



Disks and partitions images contain a copy of track 0 along with MBR (Master Boot Record). It appears in this window in a separate line. You can choose whether to restore MBR and track 0 by checking the respective box. Restore MBR if it is critical to your system boot.

2. Click **Next**.

6.3.5 Selecting a target disk/partition

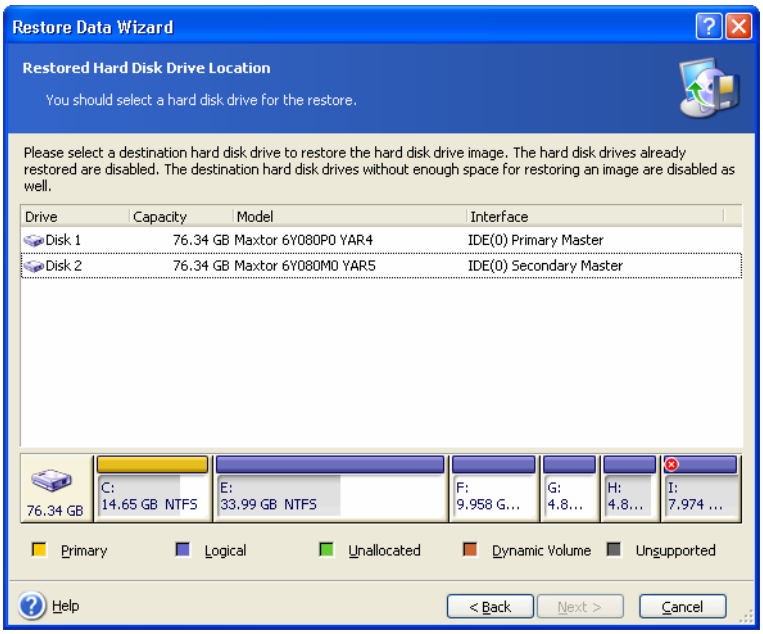
1. Select a target disk or partition where you want to restore the selected image. You can restore data to their initial location, to another disk/partition or to an unallocated space. The target partition should be at least the same size as the uncompressed image data.

All the data stored on the restored partition will be replaced by the image data, so be careful and watch for non-backed-up data that you might need.

2. Click **Next**.

3. When restoring an entire disk, the program will analyze the target disk structure to see if the disk is free.

Copyright © Acronis, Inc., 2000-2006



If there are partitions on the target disk, you will be prompted by the **Nonempty Destination Hard Disk Drive** window stating that the destination disk contains partitions, perhaps with data.

You will have to select between:

- **Yes, I want to delete all the partitions on the destination hard disk before restoring** – all existing partitions will be deleted and all their data will be lost.
- **No, I do not want to delete partitions** – no existing partition will be deleted, discontinuing the recovery operation. You will only be able to cancel the operation or return to select another disk.

Note that no real changes or data destruction will be performed at this time! For now, the program will just map out the procedure. All changes will be implemented only when you click **Proceed** in the wizard's final window.

To continue, select the first choice and click **Next**. You will be taken directly to step *6.3.10 Restoring several disks or partitions at once*.

6.3.6 Changing the restored partition type

1. When restoring a partition, you can change its type, though it is not required in most cases.

To illustrate why you might need to do this, let's imagine that both the operating system and data were stored on the same primary partition on a damaged disk.

If you are restoring a system partition to the new (or the same) disk and want to load an operating system from it, you will select **Active**.

If you restore a system partition to another hard disk with its own partitions and OS, most probably you will need only the data. In this case, you can restore the partition as **Logical** to access the data only.

By default, the original partition type is selected.

Selecting **Active** for a partition without an installed operating system could prevent your server from booting.

Copyright © Acronis, Inc., 2000-2006

2. Click **Next**.

6.3.7 Changing the restored partition file system

1. Though seldom required, you can change the partition file system during its restoration. Acronis True Image Server for Windows can make the following file system conversions: **FAT 16 -> FAT 32, Ext2 -> Ext3**. For partitions with other native file systems this option is not available.

Let us imagine you are to restore a partition from an old, low-capacity FAT16 disk to a newer disk. FAT16 would not be effective and might even be impossible to set on the high-capacity hard disk. That's because FAT16 supports partitions up to 4 GB, so you will not be able to restore a 4 GB FAT16 partition to a partition that exceeds that limit without changing the file system. It would make sense here to change the file system from FAT16 to FAT32.

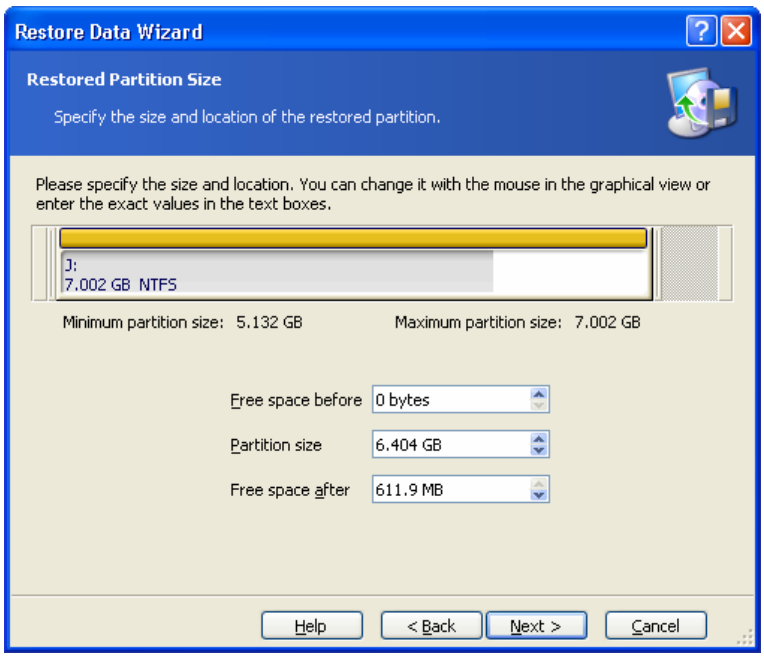
However, keep in mind that not all operating systems support FAT32. MS-DOS, Windows 95 and Windows NT 3.x, 4.x do not support FAT32 and will not be operable after you restore a partition and change its file system. These can be normally restored on a FAT16 partition only.

2. Click **Next**.

6.3.8 Changing the restored partition size and location

1. You can resize and relocate a partition by dragging it or its borders with a mouse or by entering corresponding values into the appropriate fields.

Using this feature, you can redistribute the disk space between partitions being restored. In this case, you will have to restore the partition to be reduced first.


Restore Data Wizard
Restored Partition Size
Specify the size and location of the restored partition.
Please specify the size and location. You can change it with the mouse in the graphical view or enter the exact values in the text boxes.
J:
7.002 GB NTFS
Minimum partition size: 5.132 GB
Maximum partition size: 7.002 GB
Free space before
0 bytes
Partition size
6.404 GB
Free space after
611.9 MB
Help
< Back
Next >
Cancel

These changes might be useful if you are to copy your hard disk to a new high-capacity one by creating its image and restoring it to a new disk with larger partitions. This way of cloning is used if it is not possible to connect the second hard disk to the server (for more details about cloning see *12.1 General information*).

2. Click **Next**.

Copyright © Acronis, Inc., 2000-2006

6.3.9 Assigning a letter to the restored partition

1. Acronis True Image Server for Windows will assign an unused letter to a restored partition. You can select the desired letter from a drop-down list. If you set the switch to **No**, no letters will be assigned to the restored partition, hiding it from OS.

You should not assign letters to partitions inaccessible to Windows, such as to those other than FAT and NTFS.

2. Click **Next**.

6.3.10 Restoring several disks or partitions at once

1. During a single session, you can restore several partitions or disks, one by one, by selecting one disk and setting its parameters first and then repeating these actions for every partition or disk to be restored.

If you want to restore another disk (partition), select **Yes, I want to restore another partition or hard disk drive**. Then you will return to the partition selection window (6.3.4) again and will have to repeat the above steps. Otherwise, don't set this switch.

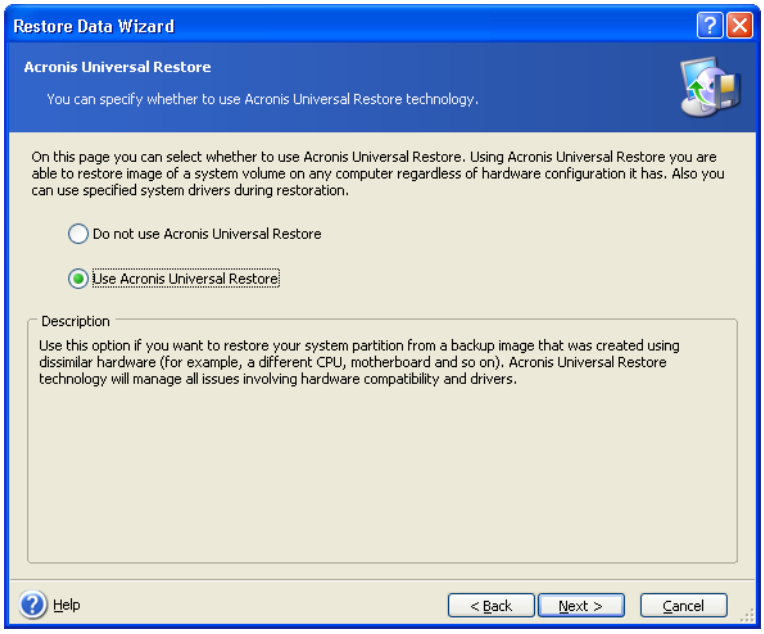
2. Click **Next**.

6.3.11 Using Acronis Universal Restore

Acronis Universal Restore is an add-on to Acronis True Image Server for Windows. It should be purchased separately and installed from a separate setup file. The following is true for Acronis True Image Server for Windows installations including Acronis Universal Restore.

The Acronis Universal Restore option does not work if the image contains dynamic disks and volumes.

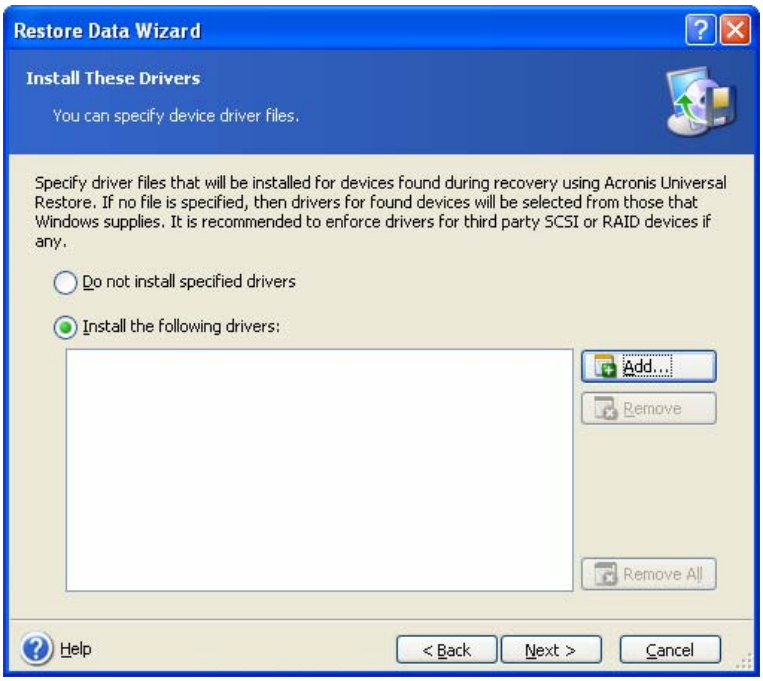
1. Using Acronis Universal Restore will help you create a bootable system clone on a different hardware (for more information see *3.6 Acronis Universal Restore*). Choose this when restoring a system disk to a computer with other processor, motherboard or mass storage device than in the imaged system.


Restore Data Wizard
Acronis Universal Restore
You can specify whether to use Acronis Universal Restore technology.
On this page you can select whether to use Acronis Universal Restore. Using Acronis Universal Restore you are able to restore image of a system volume on any computer regardless of hardware configuration it has. Also you can use specified system drivers during restoration.
Do not use Acronis Universal Restore
Use Acronis Universal Restore
Description
Use this option if you want to restore your system partition from a backup image that was created using dissimilar hardware (for example, a different CPU, motherboard and so on). Acronis Universal Restore technology will manage all issues involving hardware compatibility and drivers.
Help
< Back
Next >
Cancel

2. Click **Next**.

Copyright © Acronis, Inc., 2000-2006

3. If you know which drivers are required for the new hardware, add them to the drivers list in the next window. You can add Hardware Abstraction Layer (HAL) and mass storage devices drivers. Drivers for devices (sound cards, network adapters, video cards etc.) will be found by Windows itself when it boots.


Restore Data Wizard
Install These Drivers
You can specify device driver files.
Specify driver files that will be installed for devices found during recovery using Acronis Universal Restore. If no file is specified, then drivers for found devices will be selected from those that Windows supplies. It is recommended to enforce drivers for third party SCSI or RAID devices if any.
Do not install specified drivers
Install the following drivers:
Add...
Remove
Remove All
Help
< Back
Next >
Cancel

Acronis Universal Restore uses three sources for drivers search:

- the driver repository - a folder or folders on a network drive or CD specified in restore options. If you have not specified the driver repository in advance, you can do it at next step.

- the list of user-specified drivers created at the current step

- the Windows default driver storage folders (in the image being restored).

The program will pick out the most suitable drivers of all available drivers and install them into the restored system. However, the drivers defined by the user, will have the priority. They will be installed, with appropriate warnings, even if the program finds the better driver.

When migrating to RAID, be sure to specify an appropriate driver for the RAID controller in the **Install These Drivers** window. Otherwise a basic HDD driver will be installed.

When restoring the system to a virtual machine that uses SCSI hard drive controller, be sure to specify SCSI drivers for virtual environment in the **Install These Drivers** window. Use drivers bundled with your virtual machine software or download the latest drivers versions from the software manufacturer website.

4. Click **Next**.

6.3.12 Setting restore options

1. Select the options for the restoration process (that is, pre/post restoration commands, restoration process priority etc.). You may **Use default options** or **Set the options manually**. If the latter is the case, the settings will be applied only to the current restore task. Alternatively, you can edit the default options from the current screen. Then your settings will be saved as default. See *6.4 Setting restore options* for more information.

2. Click **Next**.

Copyright © Acronis, Inc., 2000-2006

6.3.13 Restoration summary and executing restoration

1. At the final step, the restoration summary is displayed. Up to this point, you can click **Back** to make changes in the created task. If you click **Cancel**, no changes will be made to disk(s). Clicking **Proceed** will launch the task execution.

2. The task will appear on the **Active tasks** pane of the main window. The task progress will be shown in a special window.

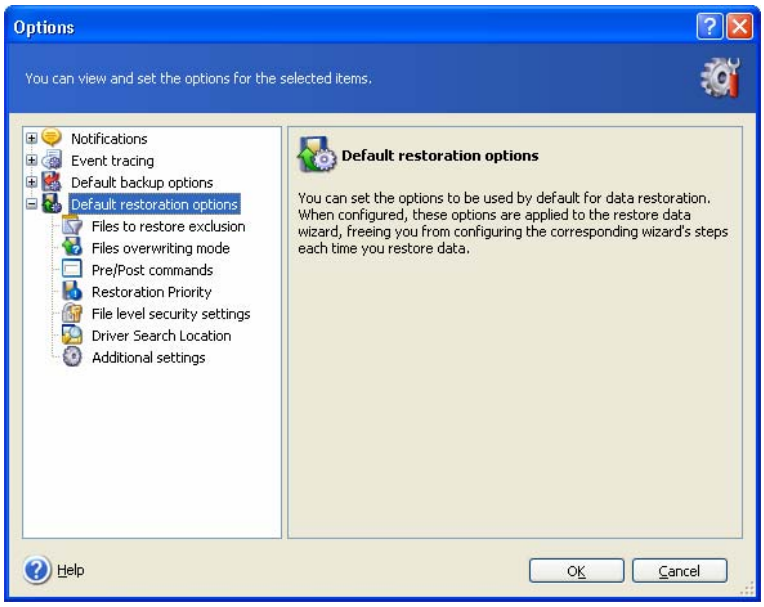
You can stop the procedure by clicking **Cancel**. However, it is critical to note that the target partition will be deleted and its space unallocated – the same result you will get if the restoration is unsuccessful. To recover the "lost" partition, you will have to restore it from the image again.

If Acronis Universal Restore finds no HAL or mass storage device drivers compatible with the new hardware in all available sources, you will be prompted to browse network share drive, floppy disk or CD to select missing drivers. On starting Windows, it will initialize a common procedure for installing new hardware. At this point, you will be able to specify drivers for devices, if Windows cannot find them automatically.

6.4 Setting restore options

To view or edit the default restore options, select **Tools -> Options -> Default Restoration Options** from the main program menu.

You can edit the default (or set the temporary) restore options while creating a restore task as well.


Options
You can view and set the options for the selected items.
Notifications
Event tracing
Default backup options
Default restoration options
Files to restore exclusion
Files overwriting mode
Pre/Post commands
Restoration Priority
File level security settings
Driver Search Location
Additional settings
Default restoration options
You can set the options to be used by default for data restoration. When configured, these options are applied to the restore data wizard, freeing you from configuring the corresponding wizard's steps each time you restore data.
Help
OK
Cancel

6.4.1 Files to exclude from restoration

The default setting – **Restore all files**.

You can set the default filters for the specific types of files that are not to be restored. Use the common Windows masking rules. For example, to exclude all files with extension .exe, add ***.exe** mask. **My???.exe** mask will reject all .exe files with names, consisting of five symbols and starting with "my".

This option is effective only when restoring files from file/folders archives. When restoring files from a disk/partition image, you cannot filter out any files.

 Copyright © Acronis, Inc., 2000-2006

6.4.2 Files overwriting mode

This option allows you to keep useful data changes made since the backup being restored was done. Choose what to do if the program finds in the target folder a file with the same name as in the archive.

Overwrite existing file – this will give the archived file unconditional priority over the file on the hard disk.

Overwrite existing file if it is older – this will give the priority to the most recent file modification, whether it be in the archive or on the disk.

Do not overwrite existing file – this will give the file on the hard disk unconditional priority over the archived file.

This option is effective only when restoring files from file/folders archives.

6.4.3 Pre/post commands

You can specify commands or batch files to be automatically executed before and after the restore procedure. Click **Edit** to open the **Edit Command** window where you can easily input the command, its arguments and working directory or browse folders to find a batch file.

Unchecking the **Do not perform operations until the commands execution is complete** box, checked by default, will permit the restore procedure to run concurrently with your commands execution.

6.4.4 Restoration priority

The default setting – **Low**.

The priority of any process running in a system determines the amount of CPU usage and system resources allocated to that process. Decreasing the restoration priority will free more resources for other CPU tasks. Increasing of restoration priority may speed up the restore process due to taking resources from the other currently running processes. The effect will depend on total CPU usage and other factors.

6.4.5 File-level security settings

The default setting – **Restore files with their security settings**.

If the files' security settings were preserved during backup (see *5.3.9 File-level security* settings), you can choose whether to restore files' security settings or let the files inherit the security settings of the folder where they will be restored.

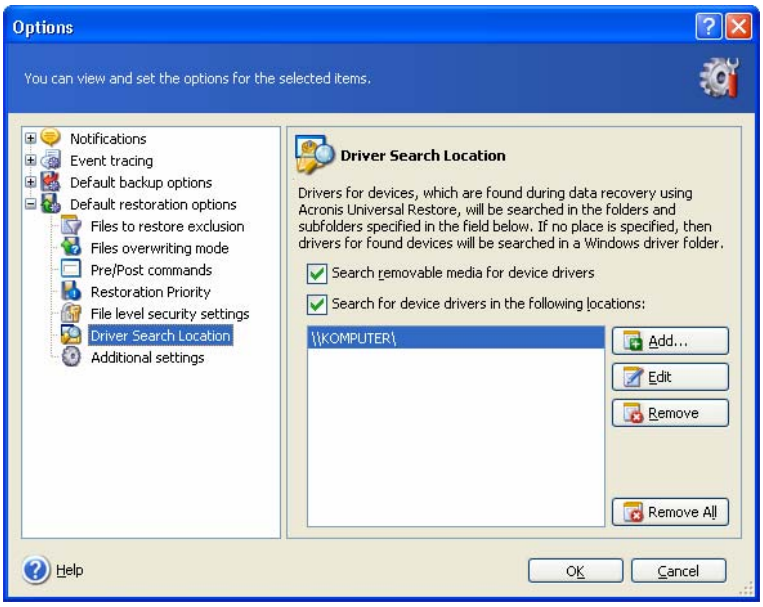
This option is effective only when restoring files from file/folders archives.

6.4.6 Driver search location

This option appears only in those computers' options, where Acronis Universal Restore is installed.

Acronis Universal Restore is an option to Acronis True Image Server for Windows. It should be purchased separately and installed from a separate setup file. For more information see *3.6 Acronis Universal Restore*.

Copyright © Acronis, Inc., 2000-2006


Options
You can view and set the options for the selected items.
Notifications
Event tracing
Default backup options
Default restoration options
Files to restore exclusion
Files overwriting mode
Pre/Post commands
Restoration Priority
File level security settings
Driver Search Location
Additional settings
Driver Search Location
Drivers for devices, which are found during data recovery using Acronis Universal Restore, will be searched in the folders and subfolders specified in the field below. If no place is specified, then drivers for found devices will be searched in a Windows driver folder.
Search removable media for device drivers
Search for device drivers in the following locations:
\\KOMPUTER\
Add...
Edit
Remove
Remove All
Help
OK
Cancel

Here you can specify a path to the driver repository - a folder or folders on a network drive or CD where Acronis Universal Restore will search for drivers at restoring a system disk on dissimilar hardware. If several paths are specified, the program will scan all locations and choose the most suitable driver.

6.4.7 Additional settings

1. You can choose whether to restore files' date and time from the archive or assign the files the current date and time.

2. Before data is restored from the archive, Acronis True Image Server for Windows can check its integrity. If you suspect that the archive might have been corrupted, select **Validate backup archive before restoration**.

To check data from an archive containing incremental backups, you must have all incremental backup files and the initial full backup. If any successive backups are missing from the archive, validation is not possible.

To check data from a differential backup, you must have the initial full backup as well.

However, if you created several differential or both incremental and differential backups based on the same full backup (and therefore, in the same folder), you will need ALL of these successive backups to validate the archive.

3. Having restored a disk/partition from an image, Acronis True Image Server for Windows can check the integrity of the file system. To do so, select **Check file system after restoration**.

Verification of the file system is available only when restoring disk/partitions under Windows and for FAT16/32 and NTFS file systems.

Copyright © Acronis, Inc., 2000-2006

Chapter 7. Scheduling tasks

Acronis True Image Server for Windows allows you to schedule periodic backup tasks. Doing so will give you peace of mind, knowing that your data are safe.

You can create more than one independently scheduled task. For example, you can back up your current project daily and back up the application disk once a week.

All the scheduled tasks appear in the **Active Tasks** area of the main window. You can start, stop, edit, delete and rename the scheduled tasks.

7.1 Creating scheduled tasks

1. To invoke the **Schedule Task Wizard**, click on its icon on the **Active Tasks** toolbar or select **Operations -> Schedule Task** from the main menu.

2. Click **Next**.

3. Configure a backup task in the usual way (see *Chapter 5. Creating backup archives*). If you choose to create the backup archive on a network drive, you will have to enter a user name and a password for network access.

4. Set the task execution periodicity.

- **Do not start automatically** – the task will be saved, but not launched automatically. You will be able to launch it later by clicking the start button on the Active Tasks pane
- **Daily** – the task will be executed once a day or once in several days
- **Weekly** – the task will be executed once a week or once in several weeks on the selected day
- **Monthly** – the task will be executed once a month on the selected day
- **One time only** – the task will be executed once at the specified time and day
- **When my computer starts** – the task will be executed at every OS startup
- **When I log on** – the task will be executed each time the current user logs in to the OS

Copyright © Acronis, Inc., 2000-2006

- **When my computer shuts down** – the task will be executed before every server shutdown or reboot
- **When I log off** – the task will be executed each time the current user logs off of the OS.

Some of these options might be disabled depending on the operating system.

5. Click **Next**.

6. Specify the task start time and other schedule parameters, according to the selected periodicity (see 7.1.1 - 7.1.4).

7. Click **Next**.

8. Next you will have to specify the name of the user who owns the executed task; otherwise no scheduled execution will be available.

Schedule Task Wizard
User Information
Select the user name and password.
Enter the name and password of a user. The task will run as if it was started by that user. Please note that the domain name must be specified if the user is a member of a domain.
Enter the user name:
test
Enter the password:
Confirm password:
If a password is not entered, the scheduled tasks might not run.
Help
< Back
Next >
Cancel

In the upper field, enter a user name. Enter a password twice in two fields below.

9. At the final step, the task configuration is displayed. Up to this point, you can click **Back** to make changes in the created task. If you click **Cancel**, all settings will be lost. Click **Finish** to save the task.

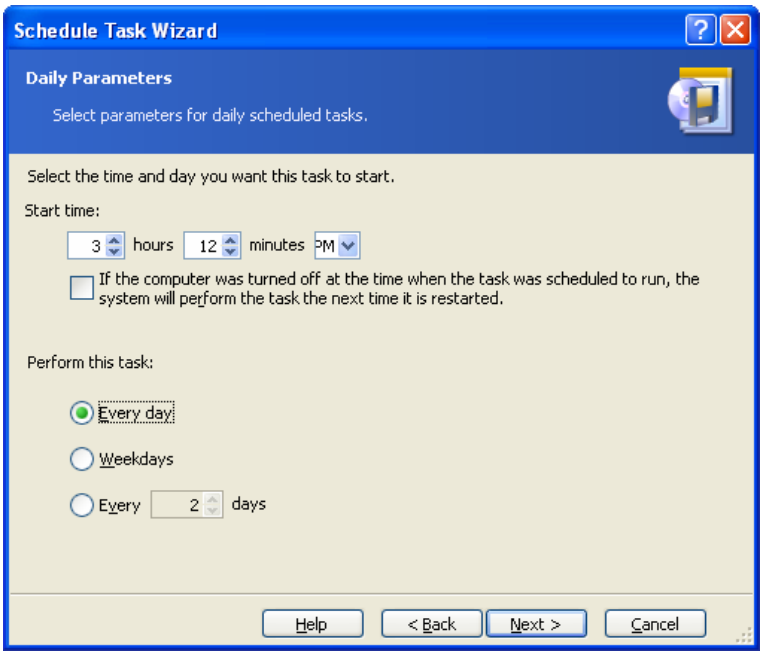
10. The task schedule and default name appear on the **Active tasks** pane of the main window. You are prompted to rename the task just now. If you do not want to do so, press the **Esc** key.

7.1.1 Setting up daily execution

If you select daily execution, set the Start time and days on which you want to execute the task:

- **Every day**
- **Weekdays**
- **Every x days** – once in several days (specify the interval).

Copyright © Acronis, Inc., 2000-2006


Schedule Task Wizard
Daily Parameters
Select parameters for daily scheduled tasks.
Select the time and day you want this task to start.
Start time:
3 hours 12 minutes PM
If the computer was turned off at the time when the task was scheduled to run, the system will perform the task the next time it is restarted.
Perform this task:
Every day
Weekdays
Every 2 days
Help
< Back
Next >
Cancel

If the computer is off when the scheduled time comes, the task won't be performed, but you can force the missed task to launch at the next system startup by checking a box under the **Start time** fields.

7.1.2 Setting up weekly execution

If you select weekly execution, set the **Start time**, specify the task execution periodicity in the **Every x weeks** box (every week, every two weeks, etc.) and check the days on which to execute the task.

Schedule Task Wizard
Weekly Parameters
Select parameters for weekly scheduled tasks.
Select the time and day you want this task to start.
Start time:
3 hours 47 minutes PM
If the computer was turned off at the time when the task was scheduled to run, the system will perform the task the next time it is restarted.
Every 1 weeks
Select the day(s) of the week below:
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Help
< Back
Next >
Cancel

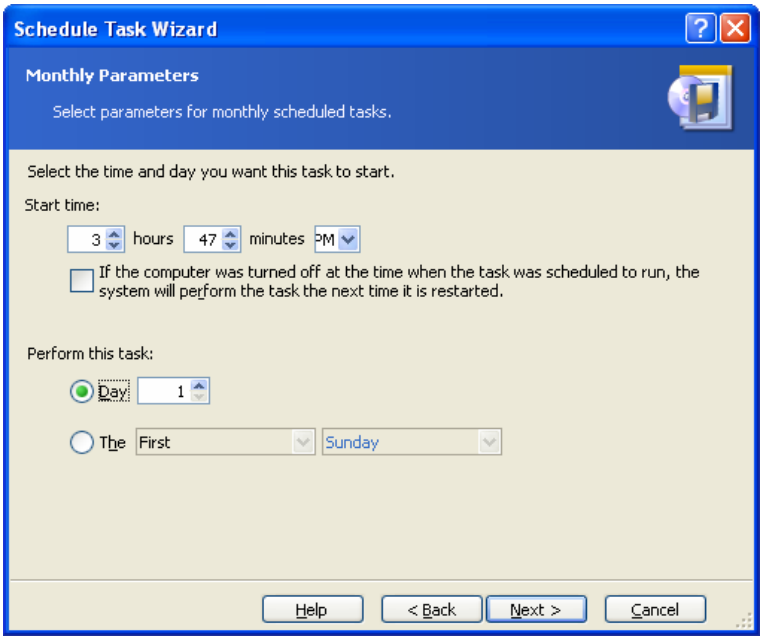
If the computer is off when the scheduled time comes, the task won't be performed, but you can force the missed task to launch at the next system startup by checking a box under the **Start time** fields.

Copyright © Acronis, Inc., 2000-2006

7.1.3 Setting up monthly execution

If you select monthly execution, set the **Start time** and days on which to execute the task:

- **Day** – on the specified date
- **The <specify a day>** – on the specified day (e.g. on second Tuesday or fourth Friday); select this from the drop-down lists.


Schedule Task Wizard
Monthly Parameters
Select parameters for monthly scheduled tasks.
Select the time and day you want this task to start.
Start time:
3 hours 47 minutes PM
If the computer was turned off at the time when the task was scheduled to run, the system will perform the task the next time it is restarted.
Perform this task:
Day 1
The First Sunday
Help
< Back
Next >
Cancel

If the computer is off when the scheduled time comes, the task won't be performed, but you can force the missed task to launch at the next system startup by checking a box under the **Start time** fields.

7.1.4 Setting up one-time execution

If you select the one-time execution, set the **Start time** and date on which to execute the task:

Schedule Task Wizard
One Time Parameters
Select parameters for one-time-only scheduled task.
Select the time and date you want this task to start.
Start time:
5 hours 32 minutes PM
If the computer was turned off at the time when the task was scheduled to run, the system will perform the task the next time it is restarted.
Start date:
12 30 2005
Help
< Back
Next >
Cancel

Copyright © Acronis, Inc., 2000-2006

If the computer is off when the scheduled time comes, the task won't be performed, but you can force the missed task to launch at the next system startup by checking a box under the **Start time** fields.

7.2 Managing scheduled tasks

The task Status, Schedule, Last Run Time and Last Result are shown on the **Active tasks** pane of the main window. To view the other task details, right-click on its name.

There are two ways of changing the task parameters. Editing allows you to change any task parameters. This is performed in the same way as creation, however, the earlier selected options will be set, so you have to enter only the changes. To edit a task, select it and click **Edit the Selected Task** on the **Active tasks** toolbar.

If you want to change only periodicity and/or start time, click **Schedule the Selected Task** on the **Active tasks** toolbar. Then you will have to perform only scheduling steps, leaving the backup settings the same.

To delete a task with confirmation, select it and click **Delete the Selected Task** on the **Active tasks** toolbar.

To rename a task, select it, click **Rename the Selected Task** on the **Active tasks** toolbar, enter the new task name and press Enter.

Copyright © Acronis, Inc., 2000-2006

Chapter 8. Managing Acronis Secure Zone

8.1 Creating Acronis Secure Zone

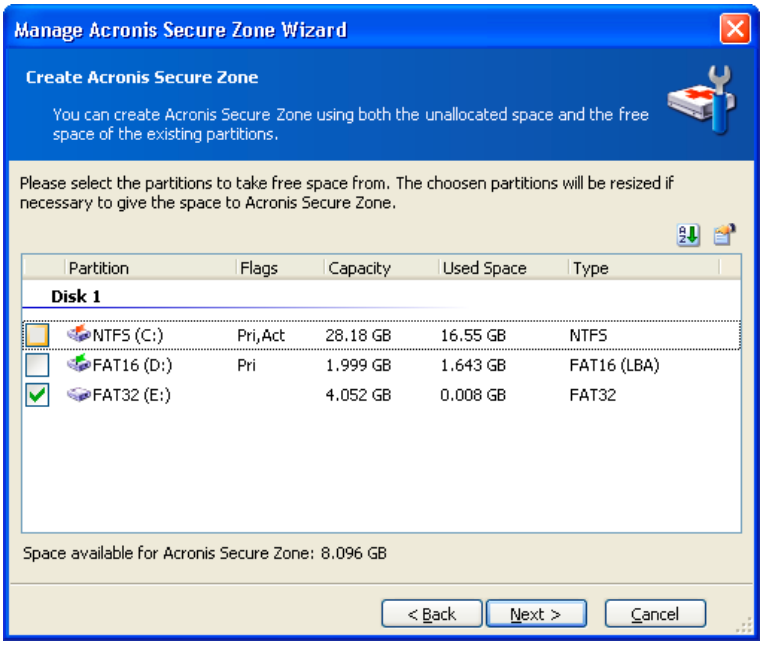
Acronis Secure Zone can be located on any local disk. It is created using unallocated space, if available, or at the expense of free space on a partition. A computer can have only one secure zone. To create a zone on another disk, you must first delete an existing zone.

When you click **Manage Acronis Secure Zone** in the menu, the program searches for the zone on all local drives. If a zone is found, the wizard will offer to delete or resize it. If there is no zone, you'll be prompted to create it.

1. Before creating the Acronis Secure Zone, you may want to estimate its size. To do so, start a backup and select all data you are going to backup into the Acronis Secure Zone. At the **Set Backup Options** step choose **Set the options manually**, then set the compression level. You will see the estimated full backup size. Multiply this by about 1.5 to be able to create incremental or differential archives.

2. If there are several disks installed, select one on which to create Acronis Secure Zone.

3. Select the partitions from which space will be used to create the zone.



4. In the next window, enter the size of the zone or drag the slider.

5. After this, you will be prompted to activate Acronis Recovery Manager, which will enable you to start Acronis True Image Server for Windows at boot time by pressing F11 key. Alternatively, you can activate this feature later from main program window.

6. Then you will see a list of operations to be performed on partitions (disks).

After you click **Proceed**, Acronis True Image Server for Windows will start creating the zone. Progress will be reflected in a special window. If necessary, you can stop zone creation by clicking **Cancel**. However, the procedure will be canceled only after the current operation is finished.

Acronis Secure Zone creation might take several minutes or more. Please wait until the whole procedure is finished.

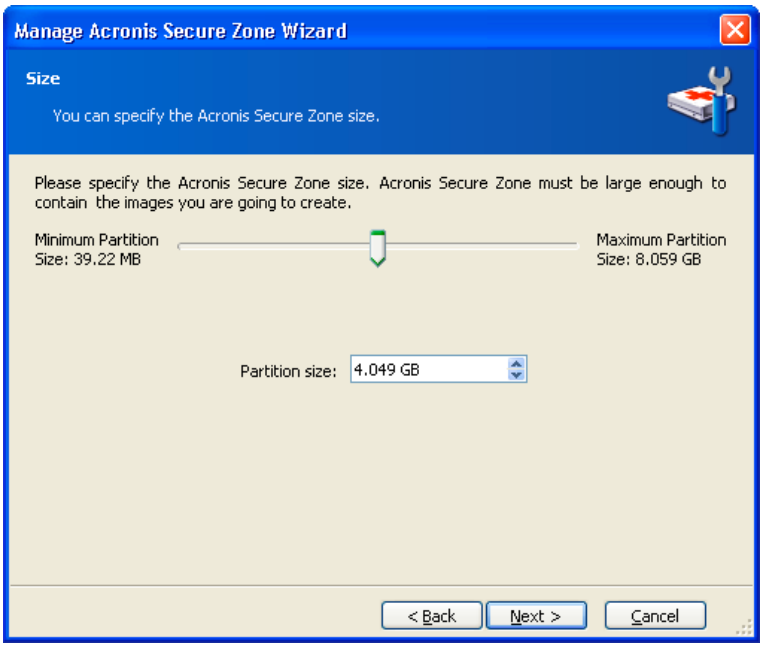
Copyright © Acronis, Inc., 2000-2006

8.2 Resizing Acronis Secure Zone

1. When prompted by the wizard, select **Manage Acronis Secure Zone**.

2. Select to increase or decrease the zone. You might need to increase it to provide more space for archives. The opposite situation might arise if either partition lacks free space.

3. Select partitions from which free space will be used to increase Acronis Secure Zone or that will receive free space after the zone is reduced.


Manage Acronis Secure Zone Wizard
Size
You can specify the Acronis Secure Zone size.
Please specify the Acronis Secure Zone size. Acronis Secure Zone must be large enough to contain the images you are going to create.
Minimum Partition Size: 39.22 MB
Maximum Partition Size: 8.059 GB
Partition size:
4.049 GB
< Back
Next >
Cancel

4. Enter the new size of the zone or drag the slider.

5. Next you will see a list of briefly described operations to be performed on partitions (disks).

After you click **Proceed**, Acronis True Image Server for Windows will start resizing the zone. Progress will be reflected in a special window. If necessary, you can stop the procedure by clicking **Cancel**. However, the procedure will be canceled only after the current operation is finished.

Zone resizing can take several minutes or longer. Please wait until the whole procedure is finished.

8.3 Deleting Acronis Secure Zone

1. When prompted by the wizard, select **Remove Acronis Secure Zone**.

2. Select the partitions to which you want to add the space freed from the secure zone. If you select several partitions, the space will be distributed proportionally to each partition's size.

3. Next, you will see a list of briefly described operations to be performed on partitions (disks).

After you click **Proceed**, Acronis True Image Server for Windows will start deleting the zone. Progress will be reflected in the opened window. If necessary, you can stop the procedure by clicking **Cancel**. However, the procedure will be canceled only after the current operation is finished.

Copyright © Acronis, Inc., 2000-2006

Zone deletion might take several minutes or more. Please wait until the whole procedure is finished.

Acronis Secure Zone deletion will automatically disable Acronis Startup Recovery Manager if it is activated and destroy all backups stored in the zone.

Copyright © Acronis, Inc., 2000-2006

Chapter 9. Creating bootable media

9.1 Creating Acronis rescue media

You can run Acronis True Image Server for Windows on a bare metal or on a crashed computer that cannot boot. You can even back up disks on a non-Windows computer, copying all its data sector-by-sector into the backup archive. To do so, you will need bootable media with the standalone Acronis True Image Server for Windows version.

If you purchased the boxed product, you already have such a bootable CD, because the installation CD contains, besides the program installation files, the Acronis True Image Server for Windows standalone bootable version.

If you purchased Acronis True Image Server for Windows on the Web, you can create bootable media using the Bootable Media Builder. For this, you will need a CD-R/RW blank, DVD±R/RW blank, several formatted diskettes (the wizard will tell you the exact number), or any other media your server can boot from, such as a Zip drive.

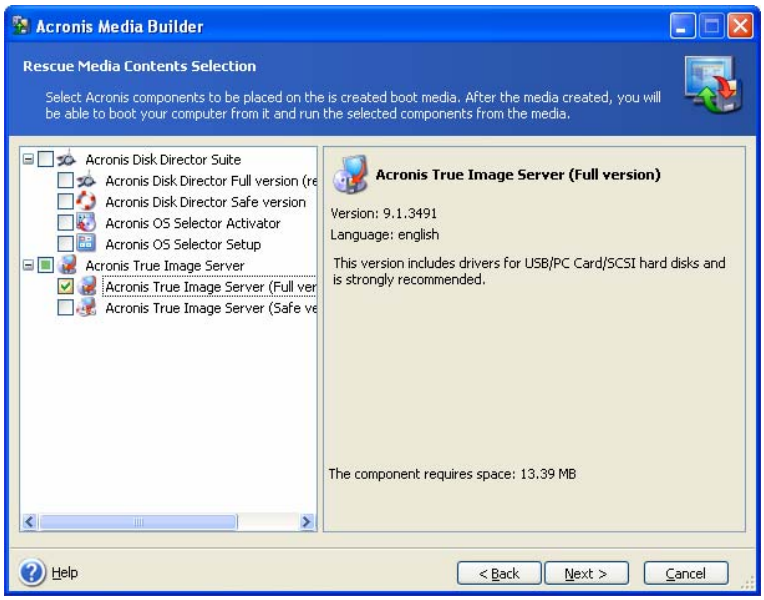
Acronis True Image Server for Windows also provides the ability to create an ISO image of a bootable disk on the hard disk. If there is a Microsoft RIS server in your local network, an IT administrator can save the bootable data on this server as well. Then any networked computer will be able to boot Acronis True Image Server for Windows from the RIS package.

If you have other Acronis products, such as Acronis Disk Director Server, installed on your computer, you can include standalone versions of these programs on the same bootable disk as well.

If you have chosen not to install the Bootable Media Builder during Acronis True Image Server for Windows installation, you will not be able to use this feature.

1. Click **Create Bootable Rescue Media** on the toolbar or the sidebar, or select **Create Bootable Rescue Media** from the **Tools** menu. You can also run the Bootable Rescue Media Builder without loading Acronis True Image Server for Windows by selecting **Programs -> Acronis -> True Image -> Bootable Rescue Media Builder** from the **Start menu**.

2. Select which components of Acronis programs you want to place on the bootable media.


Acronis Media Builder
Rescue Media Contents Selection
Select Acronis components to be placed on the is created boot media. After the media created, you will be able to boot your computer from it and run the selected components from the media.
Acronis Disk Director Suite
Acronis Disk Director Full version (re
Acronis Disk Director Safe version
Acronis OS Selector Activator
Acronis OS Selector Setup
Acronis True Image Server
Acronis True Image Server (Full ver
Acronis True Image Server (Safe ve
Acronis True Image Server (Full version)
Version: 9.1.3491
Language: english
This version includes drivers for USB/PC Card/SCSI hard disks and is strongly recommended.
The component requires space: 13.39 MB
Help
< Back
Next >
Cancel

Copyright © Acronis, Inc., 2000-2006

Acronis True Image Server for Windows offers the following components:

- **Acronis True Image Server for Windows full version**

Includes support of USB, PC Card and SCSI interfaces along with the storage devices connected via them, and therefore is highly recommended.

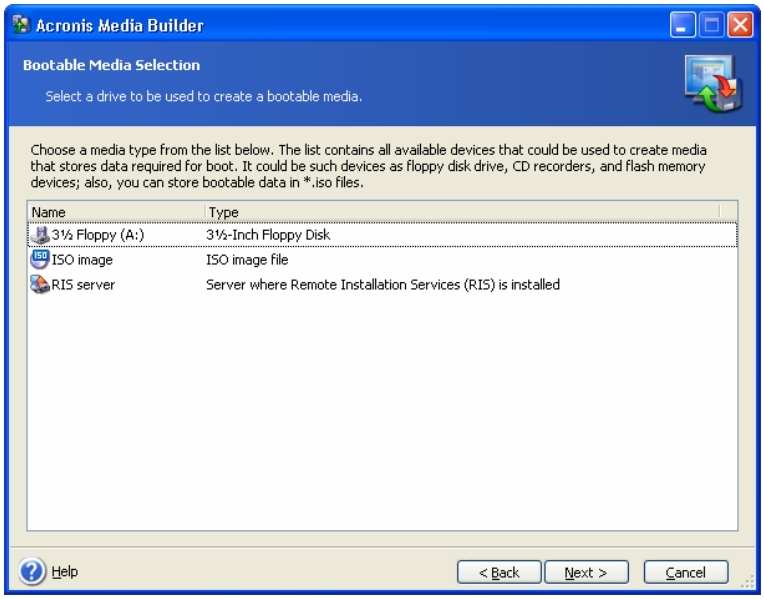
- **Acronis True Image Server for Windows safe version**

Does not include USB, PC Card, or SCSI drivers. Recommended for use in case of problems with running Full version

To find more about components of other Acronis products, see the respective user guides.

3. Select the type of bootable media (CD-R/RW, DVD+R/RW or 3.5" diskettes) to create. If your BIOS has this feature, you can create other bootable media such as removable USB flash drives. You can also choose to create a bootable disk ISO image or save bootable data on the RIS server.

When using 3.5" diskettes, you will be able to write on a diskette (or a set of the diskettes) only one component at a time (for example, Acronis True Image Server for Windows). To write another component, start Bootable Media Builder once again.


Acronis Media Builder
Bootable Media Selection
Select a drive to be used to create a bootable media.
Choose a media type from the list below. The list contains all available devices that could be used to create media that stores data required for boot. It could be such devices as floppy disk drive, CD recorders, and flash memory devices; also, you can store bootable data in *.iso files.
Name
Type
3½ Floppy (A:)
3½-Inch Floppy Disk
ISO image
ISO image file
RIS server
Server where Remote Installation Services (RIS) is installed
Help
< Back
Next >
Cancel

4. If you are creating a CD, DVD, diskettes or any removable media, insert the blank disk so the program can determine its capacity. If you chose to create a bootable disk ISO image, specify the ISO file name and the folder in which to place it. If you chose to save bootable data on a RIS server, specify the server and provide the user name and password to access it.

5. Next, the program will calculate how many blank disks are required (in case you have not chosen ISO or RIS) and give you time to prepare them. When you are finished, click **Proceed**.

After you create a boot disk, identify it and keep it in a safe place.

9.2 Creating Win PE ISO with Acronis True Image Server for Windows

Windows Preinstallation Environment (Win PE) is a minimal Windows system based on the Windows XP Professional and the Windows Server 2003 kernels. Win PE is commonly used by OEMs and corporations for deployment, test, diagnostic and system repair purposes. Using Acronis True Image Server for Windows in Windows Preinstallation Environment allows

Copyright © Acronis, Inc., 2000-2006

combination of Acronis True Image Server for Windows and Win PE facilities and therefore provides more functionality than using only-Acronis bootable media. The Acronis Universal Restore add-on to Acronis True Image Server for Windows, if installed, will also be included in the ISO image.

To add the Acronis True Image Server for Windows plug-in to your Win PE distribution:

1. Make sure that **Acronis Bart PE plug-in** is installed on the computer (the default path is \Program Files\Acronis\TrueImageServer\BartPE). If not, run Acronis True Image Server for Windows setup file, choose **Modify** and install the Acronis Bart PE plug-in.

Acronis Win PE ISO Builder locates the Acronis Bart PE plug-in using the registry key **HKEY_LOCAL_MACHINE\SOFTWARE\Acronis\TrueImageServer\ Settings\BartPE,** created at the time of installation. If you moved the Bart PE plug-in to another folder after installation, change the key accordingly. If the above key is missing, the builder does not work.

2. Insert your Win PE distribution CD into the media drive of the computer. If you have a distribution copy on the hard disk, trace the exact path to it. The distribution files must be unpacked and allocated in a separate folder.

3. Select Programs -> Acronis ->Acronis True Image Server for Windows -> Acronis Win PE ISO Builder.

4. Specify a source folder for building Win PE ISO, i.e. the media drive with Win PE distribution or a folder with the distribution copy.

5. Locate a folder where you want to create Win PE ISO and provide the name for the ISO file.

6. Check your settings in the summary screen and click **Proceed**.

7. Use any third-party tool that will burn ISO images to CD or DVD.

Copyright © Acronis, Inc., 2000-2006

Chapter 10. Other operations

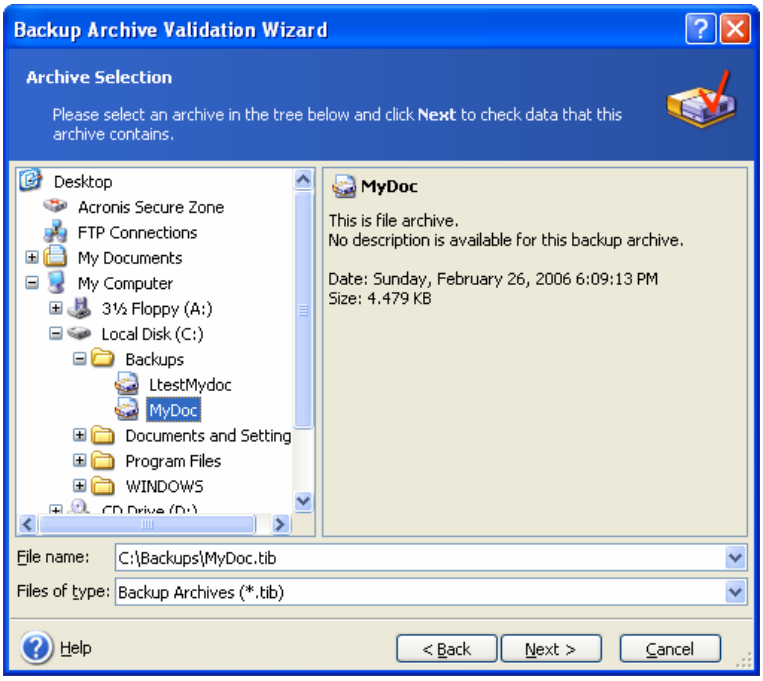
10.1 Validating backup archives

To be certain that your archives are not damaged, you can check their integrity.

1. To invoke the **Backup Archive Validation Wizard**, select **Validate Backup Archive** in the main window or in the **Tools** group or click **Validate Backup Archive** on the toolbar.

2. Click **Next**.

3. Select the archive to validate. If the archive is located in Acronis Secure Zone, select it to choose the archive on the next step.



4. Click **Next**.

5. Clicking **Proceed** will launch the validation procedure. After the validation is complete, you will see the results window. You can cancel checking by clicking **Cancel**.

To check data from an archive containing incremental backups, you must have all incremental backup files and the initial full backup. If any successive backups are missing from the archive, the validation is not possible.

To check data from a differential backup, you must have the initial full backup as well.

However, if you created several differential or both incremental and differential backups based on the same full backup (and therefore, in the same folder), you will need ALL of these successive backups to validate the archive.

10.2 Operation results notification

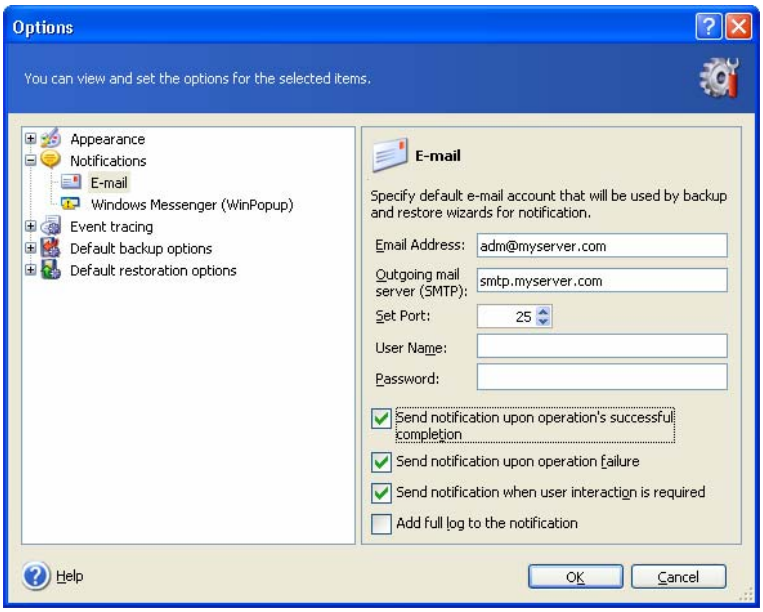
Sometimes a backup or restore procedure can last for 30 minutes or more. Acronis True Image Server for Windows can notify you when it is finished using the WinPopup service or via e-mail. The program can also duplicate messages issued during the operation or send you the full operation log after operation completion.

By default all notifications are **disabled**.

Copyright © Acronis, Inc., 2000-2006

10.2.1 Email notification

To set up e-mail notification, select **Tools -> Options -> Notifications -> E-mail**:



Provide the email address to which notifications will be sent and the outgoing SMTP server name. A user name and a password might also be needed if the SMTP server requires authentication.

Below in this window you can choose whether you want to get notifications:

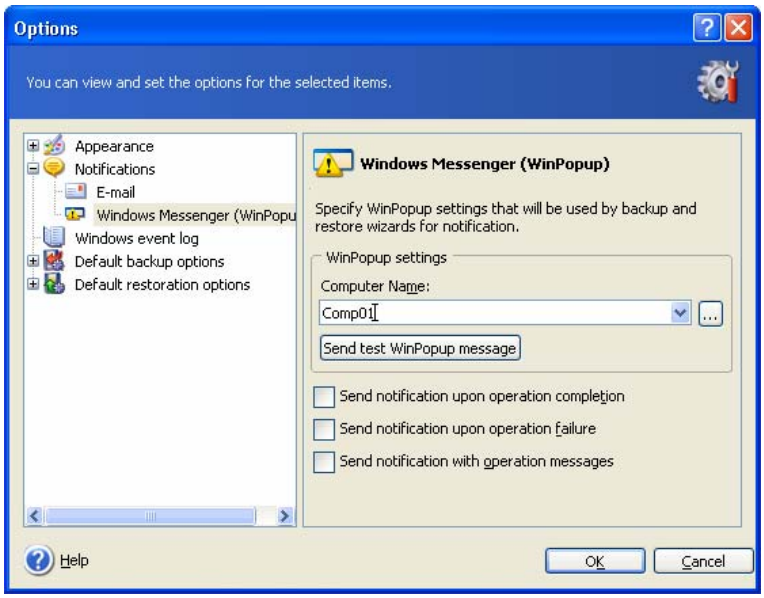
- when the operation is completed successfully (check **Add full log to the notification** to add the full operation log to the message)

- when the operation failed (check **Add full log to the notification** to add the full operation log to the message)

- during the operation when user interaction is required.

10.2.2 WinPopup notification

To set up WinPopup notification, select **Tools -> Options -> Notifications -> Windows Messenger (WinPopup)**:



Provide the name of the computer to which notifications will be sent.

Below in this window you can choose whether you want to get notifications:

- when the operation is completed successfully

- when the operation failed

- during the operation when user interaction is required.

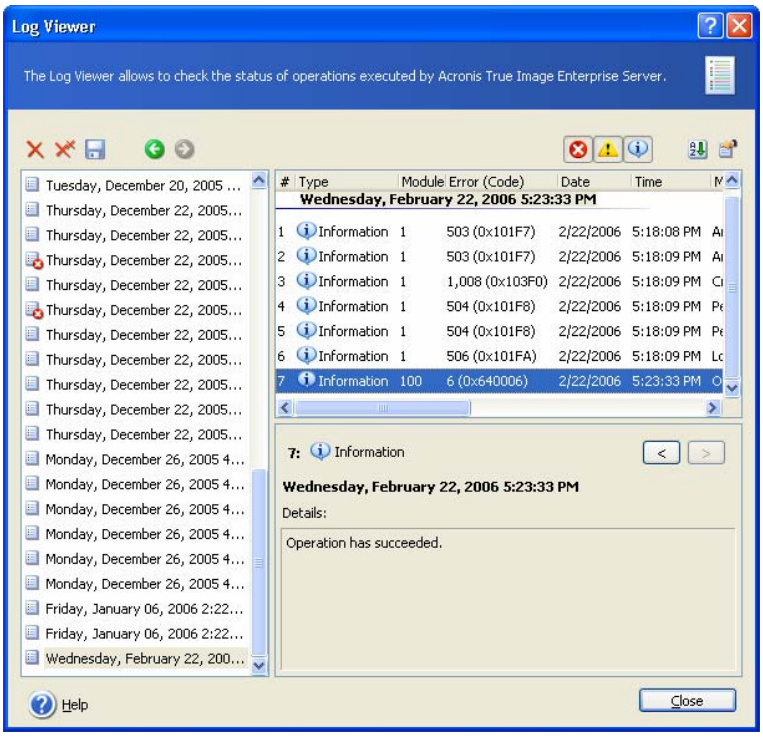
10.3 Viewing logs

Acronis True Image Server for Windows allows users to view its working logs. They can provide information about scheduled backup tasks results, including reasons for failure, if any.

To invoke the log window, select **Show log** on the toolbar or from the **Tools** menu.

The log browsing window contains two panes: the left one features the log list, while the right one shows selected log contents.

 Copyright © Acronis, Inc., 2000-2006


Log Viewer
The Log Viewer allows to check the status of operations executed by Acronis True Image Enterprise Server.
Tuesday, December 20, 2005 ...
Thursday, December 22, 2005...
Monday, December 26, 2005 4...
Friday, January 06, 2006 2:22...
Wednesday, February 22, 200...
Type Module Error (Code) Date Time
Wednesday, February 22, 2006 5:23:33 PM
1 Information 1 503 (0x101F7) 2/22/2006 5:18:08 PM
2 Information 1 503 (0x101F7) 2/22/2006 5:18:09 PM
3 Information 1 1,008 (0x103F0) 2/22/2006 5:18:09 PM
4 Information 1 504 (0x101F8) 2/22/2006 5:18:09 PM
5 Information 1 504 (0x101F8) 2/22/2006 5:18:09 PM
6 Information 1 506 (0x101FA) 2/22/2006 5:18:09 PM
7 Information 100 6 (0x640006) 2/22/2006 5:23:33 PM
7: Information
Wednesday, February 22, 2006 5:23:33 PM
Details:
Operation has succeeded.
Help
Close

The left panel can contain up to 50 logs. If there are more, you can browse the list using the **More** and **Less** buttons with the left and right arrows.

To delete a log, select it and click **Delete**.

If any step was terminated by an error, the corresponding log will be marked with a red circle with a white cross inside.

The right window features the list of steps contained in the selected log. The three buttons to the right control message filters: the white cross in the red circle filters error messages, the exclamation sign in a yellow triangle filters warnings, and the “i” in the blue circle filters information messages.

To select columns (step parameters) to display, right-click the headers line or left-click the **Choose Details** button. Then check the desired parameters.

To sort messages by a particular parameter, click its header (click again to reverse order) or the **Arrange Icons by** button (the second from the right) and select the desired parameter.

You can also change column width by dragging the borders with a mouse.

10.4 Event tracing

10.4.1 Windows event log

You can choose whether to store event log messages issued by Acronis True Image Server for Windows to Windows Event Log (to see this log, run **eventvwr.exe** or select **Control Panel -> Administrative tools -> Event Viewer -> Application**).

The default setting – **Do not save messages**

To change this setting, select **Tools -> Options -> Windows event log**.

An additional choice is available between recording **All events, Warnings and Errors**, or **Errors only**.

Copyright © Acronis, Inc., 2000-2006

10.4.2 SNMP notifications

You can choose whether to send event log messages issued by Acronis True Image Server for Windows to computers, running SNMP (Simple Network Management Protocol) management applications.

The default setting – **Do not send messages to SNMP clients**

Having chosen **Send messages to SNMP clients**, specify a name or IP address of the client computer. Otherwise messages will be sent to all SNMP clients found in the local network.

An additional choice is available between sending **All events, Warnings and Errors**, or **Errors only** messages.

Acronis True Image Server for Windows provides the following SNMP objects to SNMP management applications:

1.3.6.1.4.1.24769.100.200.1.0 - string identifying a type of occurred event (Information, Warning, Error)

1.3.6.1.4.1.24769.100.200.2.0 - string containing text description of occurred event (it looks identically to messages published by Acronis True Image Server for Windows in its log).

10.5 Managing System Restore

Microsoft Windows System Restore tool, available in Windows XP and Windows 2003 Server operating systems, is used to undo harmful changes to the system without losing recently changed or created user data. To run the System Restore tool or find out more about it, select **Start -> Programs -> Accessories -> System Tools -> System Restore**. (Please be aware that the older Windows Server versions do not feature System Restore, therefore, under these operating systems **Manage System Restore** tool is unavailable.)

If you run Acronis True Image Server for Windows regularly, this feature in your operating system is redundant. You can turn it off, freeing up to 12% of your hard disk space, directly from Acronis True Image Server for Windows.

1. To invoke the **System Restore Management Wizard**, click the **Manage System Restore** icon in the main program window.

2. Click **Next**.

3. Now you can turn on/off System Restore on all your hard disk(s) partitions at once or do it individually for each partition.

Note that you cannot turn off System Restore on the system disk (partition), yet keep it on other disks (partitions).

4. Click **Next**.

5. The program lists the configured changes. You can click **Back** to choose different settings. If you click **Cancel**, all new settings will be lost. Click **Proceed** to apply the changes.

If you turn off System Restore on any disk or partition, all previously created restore points for that disk (partition) will be deleted. Please make sure you do not need those restore points before proceeding.

 Copyright © Acronis, Inc., 2000-2006

Chapter 11. Mounting an image as a virtual drive

Acronis True Image Server for Windows can **mount partition images as virtual drives**, thus letting you access them as though they were physical drives. This means that:

- A new disk with its own letter will appear in the drives list
- Using Windows Explorer and other file managers, you can view the image contents as if they were located on a physical disk or partition
- You will be able to use the virtual disk in the same way as the real one: open, save, copy, move, create, delete files or folders. If necessary, the image can be mounted in read-only mode.

Please keep in mind that, though both file archives and disk/partition images have a default ".tib" extension, only **partition images** can be mounted. If you want to view file archive contents, use the Restore Data Wizard (see *6.2 Restoring files and folders from file archives*, steps 1-9).

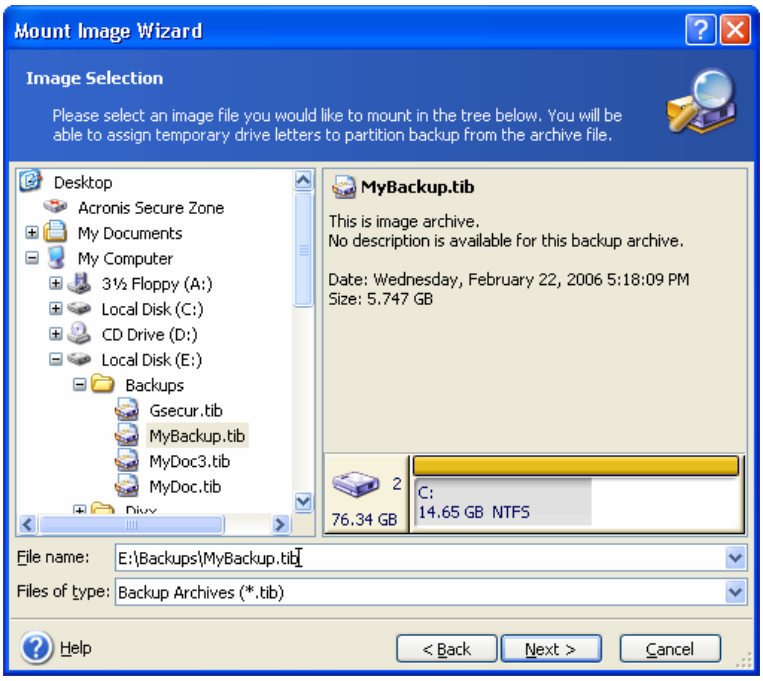
The current version of Acronis True Image Server for Windows can mount an image archive only if all its volumes reside in the same directory. If your archive spans several CD-R/RW discs and you wish to mount the image, you should copy all volumes to a hard disk drive or network drive.

11.1 Mounting an image

1. Invoke the **Mount Image Wizard** by clicking on the **Mount Image** operation icon in the main program window.

2. Click **Next**.

3. Select the archive from the drives tree. If the archive is located in Acronis Secure Zone, select it to choose the archive at the next step.



Copyright © Acronis, Inc., 2000-2006

If you added a comment to the archive, it will be displayed to the right of the drives tree. If the archive was protected with a password, Acronis True Image Server for Windows will ask for it. Neither the partitions layout, nor the **Next** button will be enabled until you enter the correct password.

4. Click **Next**.

5. If you selected an archive containing incremental images, Acronis True Image Server for Windows will suggest that you select one of the successive incremental images by its creation date/time. Thus, you can explore the partition state to a certain moment.

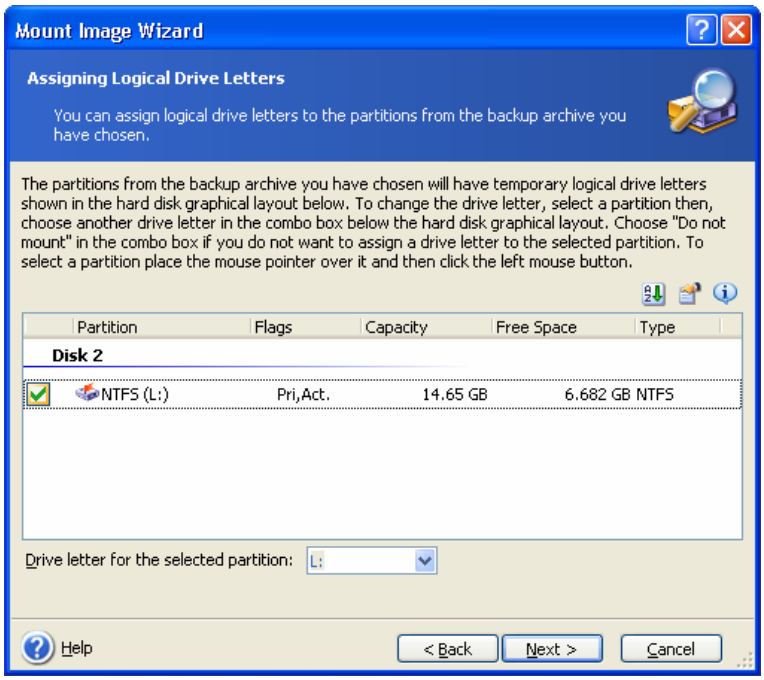
To mount an incremental image, you must have all previous incremental images and the initial full image. If any of the successive images are missing, mounting is not possible.

To mount a differential image, you must have the initial full image as well.

6. Click **Next**.

7. Select a partition to mount as a virtual disk. (Note that you cannot mount the entire disk.)

You can also select a letter to be assigned to the virtual disk from the **Drive letter** drop-down list. If you do not want to assign a letter to the virtual drive, select **Do not assign**.


Mount Image Wizard
Assigning Logical Drive Letters
You can assign logical drive letters to the partitions from the backup archive you have chosen.
The partitions from the backup archive you have chosen will have temporary logical drive letters shown in the hard disk graphical layout below. To change the drive letter, select a partition then, choose another drive letter in the combo box below the hard disk graphical layout. Choose "Do not mount" in the combo box if you do not want to assign a drive letter to the selected partition. To select a partition place the mouse pointer over it and then click the left mouse button.
Partition
Flags
Capacity
Free Space
Type
Disk 2
NTFS (L:)
Pri,Act.
14.65 GB
6.682 GB NTFS
Drive letter for the selected partition:
L:
Help
< Back
Next >
Cancel

8. Click **Next**.

9. Select whether you want to mount image in **Read-only** or **Read/Write** mode.

10. Click **Next**.

11. If you select **Read/Write** mode, the program assumes that the connected image will be modified, and creates an incremental archive file to capture the changes. It is strongly recommended that you list the forthcoming changes in the comment to this file.

12. The program displays a summary containing a single operation. Click **Proceed** to connect the selected partition image as a virtual disk.

13. After the image is connected, the program will run Windows Explorer, showing its contents. Now you can operate with files or folders as if they were located on a real disk.

Copyright © Acronis, Inc., 2000-2006

You can connect multiple partition images. If you want to connect another partition image, repeat the procedure.

11.2 Unmounting an image

We recommend that you unmount the virtual disk after all necessary operations are finished, as keeping up virtual disks takes considerable system resources. If you do not, the virtual disk will disappear after your server is turned off.

To disconnect the virtual disk, click **Unmount Image** and select the disk to unmount. You can also unmount the disk in Windows Explorer by right-clicking on its icon and selecting **Unmount**.

Copyright © Acronis, Inc., 2000-2006

Chapter 12. Transferring the system to a new disk

12.1 General information

Sooner or later any computer user finds out that the hard disk is too small. If you just don't have space for more data, you can add another disk just for data storage as described in the following chapter.

However, you might find that your hard disk does not have enough space for the operating system and installed applications, preventing you from updating your software. In this case, you have to transfer the system to a higher-capacity hard disk.

To transfer the system, you must first install the disk in the server. If a server doesn't have a bay for another hard disk, you can temporarily install it in place of your CD-ROM. If that is not possible, you can clone a hard disk by creating its image and restoring it to a new hard disk with larger partitions.

There are two transfer modes available: automatic and manual.

In the automatic mode, you will only have to take some simple actions to transfer all the data, including partitions, folders and files, to a newer disk, making it bootable if the original disk was bootable.

There will be only one difference between these disks – partitions on the newer disk will be larger. Everything else, including the installed operating systems, data, disk labels, settings, software and everything else on the disk, will remain the same.

This is the only result available in the automatic mode. The program can only duplicate the original disk layout to the new one. To obtain a different result, you will have to answer additional questions about cloning parameters.

The manual mode will provide more data transfer flexibility.

1. You will be able to select the method of partition and data transfer:

- as is
- new disk space is proportionally distributed between the old disk partitions
- new disk space is distributed manually

2. You will also be able to select operations to perform on the old disk:

- leave partitions (and data!) on the old disk
- remove all information from the old disk
- create new partitions on the old disk (and remove all the older information)

On program screens, damaged partitions are marked with a red circle and a white cross inside in the upper left corner. Before you start cloning, you should check such disks for errors using the appropriate operating system tools.

12.2 Security

Please note the following: if the power goes out or you accidentally press **RESET** during the transfer, the procedure will be incomplete and you will have to partition and format or clone the hard disk again.

Copyright © Acronis, Inc., 2000-2006

No data will be lost because the original disk is only being read (no partitions are changed or resized) until data transfer is completed.

Nevertheless, we do not recommend that you delete data from the old disk until you are sure it is correctly transferred to the new disk, the server boots up from it and all applications work.

12.3 Executing transfers

12.3.1 Selecting Clone mode

You will see the **Clone mode** window just after the welcome window.

Disk Clone Wizard
Clone Mode
You can choose between either fully automated or manual clone modes.
Select the hard disk clone mode. You can find the description of your selection below. Press Next when ready to proceed:
Automatic
Manual
Description
Automatic mode is used for hard disk cloning. All your partitions from the old hard disk will be copied to the new one in few simple steps and make your new hard disk bootable. All your partitions will be automatically resized to fit the new hard disk. Note that you have to remove the old hard disk when data moving is completed.
Suitable for most users.
< Back
Next >
Cancel

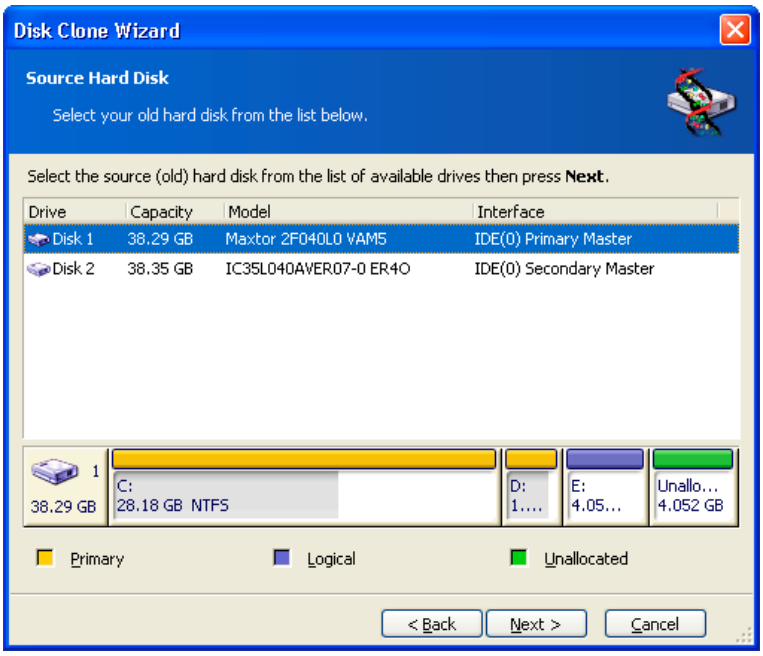
We recommend using automatic mode in most cases. The manual mode can be useful if you need to change the disk partition layout.

If the program finds two disks, one partitioned and another unpartitioned, it will automatically recognize the source disk as the partitioned disk and the destination disk as the unpartitioned disk, so the next two steps will be bypassed.

12.3.2 Selecting source disk

If the program finds several partitioned disks, it will ask you which is the source (i.e. the older data disk).

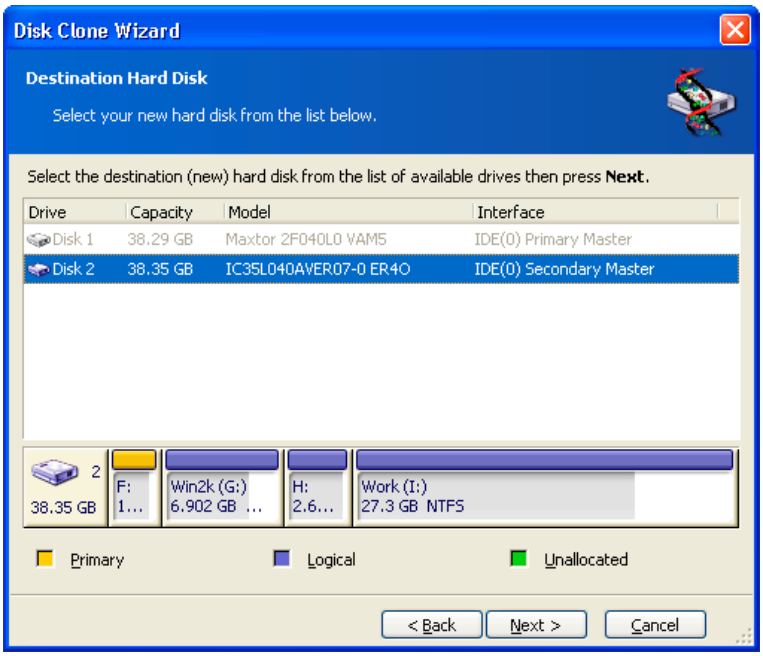
Copyright © Acronis, Inc., 2000-2006



You can determine the source and destination using the information provided in this window (disk number, capacity, label, partition and file system information).

12.3.3 Selecting destination disk

After you select the source disk, you have to select the destination where the disk information will be copied.



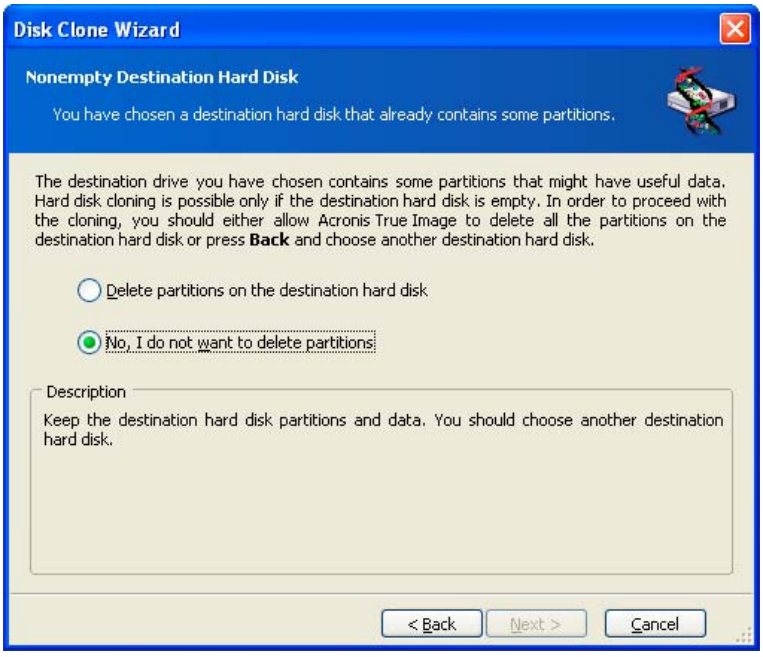
The previously selected source becomes grayed-out and disabled for selection.

If either disk is unpartitioned, the program will automatically recognize it as the destination and bypass this step.

Copyright © Acronis, Inc., 2000-2006

12.3.4 Partitioned destination disk

At this point, the program checks to see if the destination disk is free. If not, you will be prompted by the **Nonempty Destination Hard Disk** window stating that the destination disk contains partitions, perhaps with data.


Disk Clone Wizard
Nonempty Destination Hard Disk
You have chosen a destination hard disk that already contains some partitions.
The destination drive you have chosen contains some partitions that might have useful data. Hard disk cloning is possible only if the destination hard disk is empty. In order to proceed with the cloning, you should either allow Acronis True Image to delete all the partitions on the destination hard disk or press Back and choose another destination hard disk.
Delete partitions on the destination hard disk
No, I do not want to delete partitions
Description
Keep the destination hard disk partitions and data. You should choose another destination hard disk.
< Back
Next >
Cancel

You will have to select between:

- **Delete partitions on the destination hard disk** – all existing partitions will be deleted during cloning and all their data will be lost.
- **No, I do not want to delete partitions** – no existing partition will be deleted, discontinuing the cloning operation. You will only be able to cancel this operation and return to select another disk.

To continue, select the first choice and click **Next**.

Note that no real changes or data destruction will be performed at this time! For now, the program will just map out cloning. All changes will be implemented only when you click **Proceed.**

12.3.5 Old and new disk partition layout

If you selected the automatic mode before, the program will ask you for nothing further. You will see the window graphically illustrating information (as rectangles) about the source disk (partitions and unallocated space) and the destination disk layout.
Along with the disk number, some additional information is provided: disk capacity, label, partition and file system information. Partition types — primary, logical — and unallocated space are marked with different colors.

Next you will see the cloning summary.

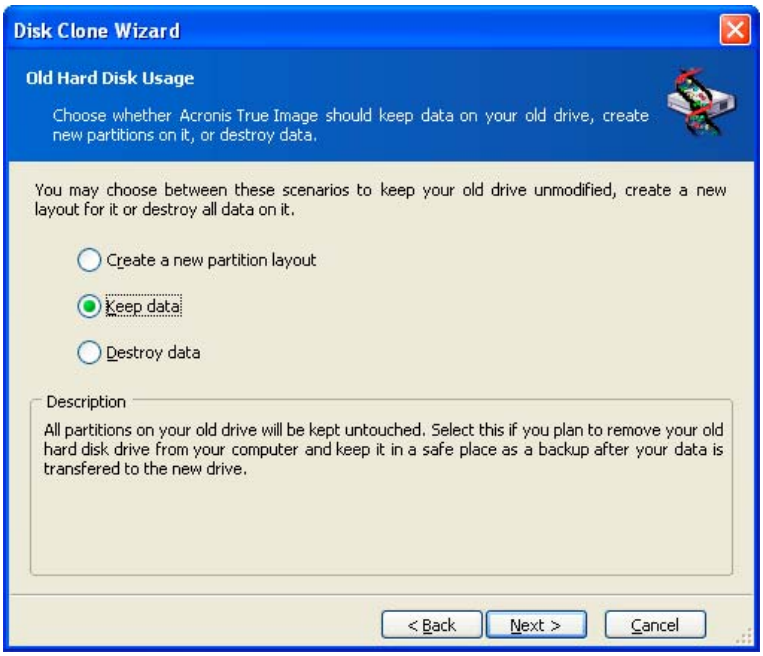
12.3.6 Old disk data

If you selected the manual mode, the program will ask you what to do with the old disk:

- **Create a new partition layout** – All existing partitions and their data will be deleted (but they will also be cloned to the new disk, so you won't lose them)

Copyright © Acronis, Inc., 2000-2006

- **Keep data** – leave the old disk partitions and data intact
- **Destroy data** – destroy all data on the old disk.


Disk Clone Wizard
Old Hard Disk Usage
Choose whether Acronis True Image should keep data on your old drive, create new partitions on it, or destroy data.
You may choose between these scenarios to keep your old drive unmodified, create a new layout for it or destroy all data on it.
Create a new partition layout
Keep data
Destroy data
Description
All partitions on your old drive will be kept untouched. Select this if you plan to remove your old hard disk drive from your computer and keep it in a safe place as a backup after your data is transfered to the new drive.
< Back
Next >
Cancel

If you are going to sell or give away your old disk, we recommend that you make sure you destroyed the data on it.

If you are going to keep it for data storage, you can create a new partition layout on it. In this case, the disk will be ready right after cloning is complete.

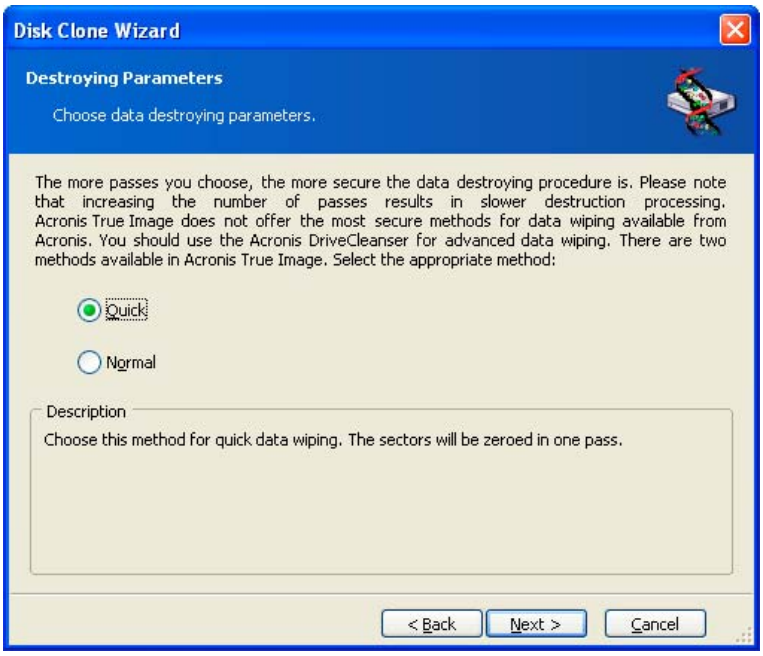
To protect yourself from unforeseen consequences, it would be better to leave the old disk data intact, as you will be able to delete it later.

12.3.7 Destroying the old disk data

If you elected to destroy the old disk data in the previous step, you will have to select the destruction method now:

- **Quick** – quick one-pass destruction
- **Normal** – multipass destruction

 Copyright © Acronis, Inc., 2000-2006


Disk Clone Wizard
Destroying Parameters
Choose data destroying parameters.
The more passes you choose, the more secure the data destroying procedure is. Please note that increasing the number of passes results in slower destruction processing. Acronis True Image does not offer the most secure methods for data wiping available from Acronis. You should use the Acronis DriveCleanser for advanced data wiping. There are two methods available in Acronis True Image. Select the appropriate method:
Quick
Normal
Description
Choose this method for quick data wiping. The sectors will be zeroed in one pass.
< Back
Next >
Cancel

The second method takes more time, but makes it impossible to recover data afterwards, even with special equipment.

The first method is less secure, but is still suitable for most cases.

12.3.8 Selecting partition transfer method

Acronis True Image Server for Windows will offer you the following data transfer methods:

- **As is**
- **Proportional** – the new disk space will be proportionally distributed among cloned partitions
- **Manual** – you will specify the new size and other parameters yourself

Disk Clone Wizard
Moving Method
Choose the method of data moving from your old drive to the new one.
Select data moving method:
As is
Proportional
Manual
Description
The original partition sizes will be scaled according to the new drive size. If the new drive is smaller in size the partitions will shrink accordingly, if the new drive is larger the partitions will be enlarged proportionally.
< Back
Next >
Cancel

If you elect to transfer information "as is," a new partition will be created for every old one with the same size and type, file system and label. The unused space will become

unallocated. Further, you will be able to use the unallocated space to create new partitions or to enlarge the existing partitions with special tools, such as Acronis Disk Director Suite.

As a rule, "as is" transfers are inexpedient, as they leave much unallocated space on the new disk. Using the "as is" method, Acronis True Image Server for Windows transfers unsupported and damaged file systems.

If you transfer data proportionally, each partition will be enlarged, according to the proportion of the old and new disk capacities.

FAT16 partitions are enlarged less than others, as they have a 4 GB size limit.

Depending on the selected combination, you will proceed to either the old disk partitioning window, or the disk partition layout window (see below).

12.3.9 Partitioning the old disk

If you selected **Create a new partition layout** earlier in the process, it is now time to repartition your old disk.

During this step, you will see the current disk partition layout. Initially, the disk has unallocated space only. This will change when you create new partitions.

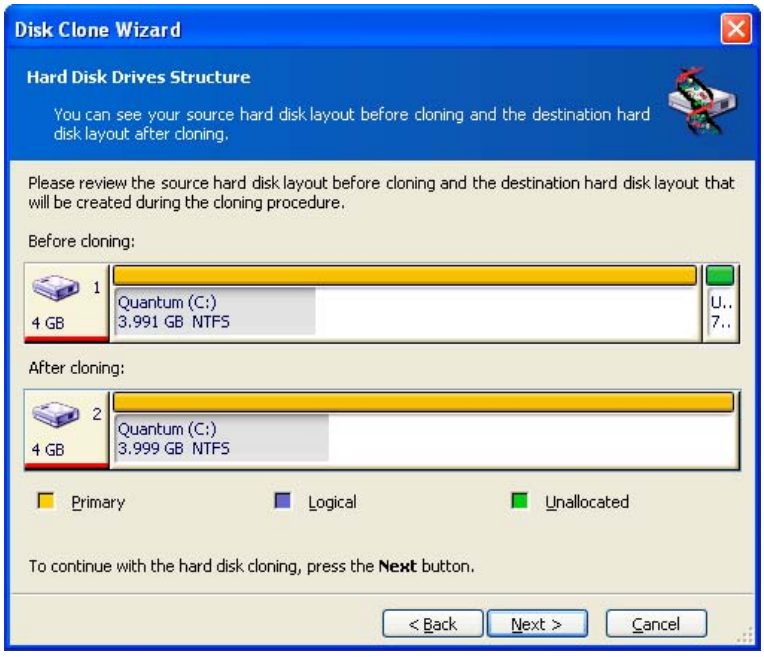
Having completed the required steps, you will add a new partition. To create another one, simply repeat those steps.

If you make a mistake, click **Back** to redo.

After you create the necessary partitions, uncheck the **Create new partition in unallocated space** box and click **Next**.

12.3.10 Old and new disk partition layouts

In the next window, you will see rectangles indicating the source hard disk, including its partitions and unallocated space, as well as the new disk layout.


Disk Clone Wizard
Hard Disk Drives Structure
You can see your source hard disk layout before cloning and the destination hard disk layout after cloning.
Please review the source hard disk layout before cloning and the destination hard disk layout that will be created during the cloning procedure.
Before cloning:
1
4 GB
Quantum (C:)
3,991 GB NTFS
After cloning:
2
4 GB
Quantum (C:)
3,999 GB NTFS
Primary
Logical
Unallocated
To continue with the hard disk cloning, press the Next button.
< Back
Next >
Cancel

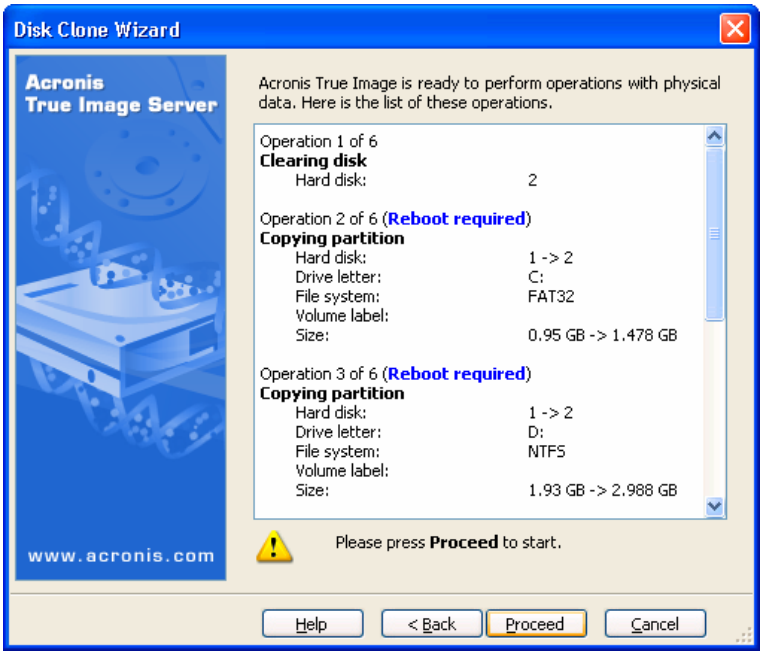
Along with the hard disk number, you will also see disk capacity, label, partition and file system information. Different partition types, including primary, logical and unallocated space are marked with different colors.

 Copyright © Acronis, Inc., 2000-2006

If you selected manual partition creation earlier, the partition layout will look different. This partitioning method is described below.

12.3.11 Cloning summary

In the next window, you will see a list of briefly described operations to be performed on the disks.



Cloning a disk containing the currently active operating system will require a reboot. In that case, after clicking **Proceed** you will be asked to confirm the reboot. Canceling the reboot will cancel the entire procedure.

Cloning a non-system disk or a disk containing an operating system, but one that is not currently active, will proceed without reboot. After you click **Proceed**, Acronis True Image Server for Windows will start cloning the old disk to the new disk, indicating the progress in a special window. You can stop this procedure by clicking **Cancel**. In that case, you will have to repartition and format the new disk or repeat the cloning procedure. After the operation is complete, you will see the results message.

12.4 Cloning with manual partitioning

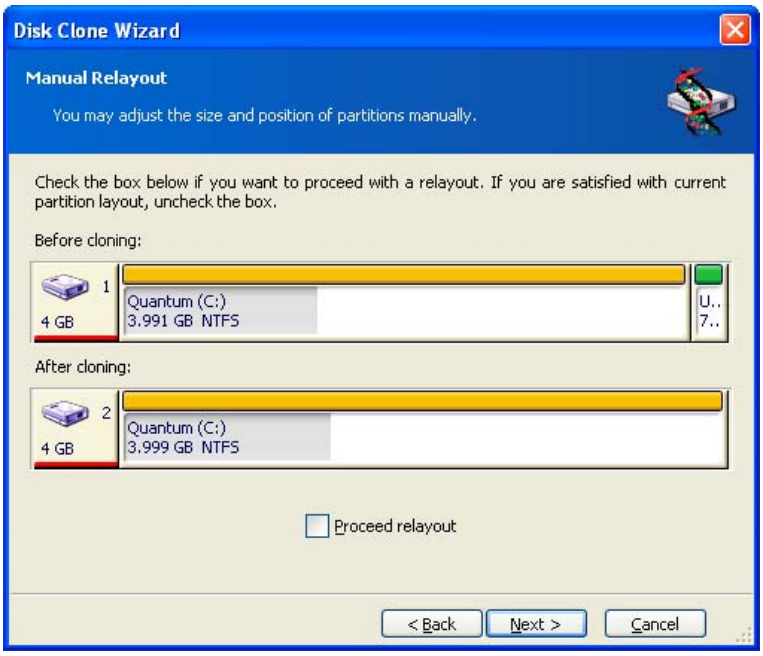
12.4.1 Old and new disk partition layouts

The manual transfer method enables you to resize partitions on the new disk. By default, the program resizes them proportionally.

In the next window, you will see rectangles indicating the source hard disk, including its partitions and unallocated space, as well as the new disk layout.

Along with the hard disk number, you will see disk capacity, label, partition and file system information. Different partition types, including primary, logical and unallocated space are marked with different colors.

Copyright © Acronis, Inc., 2000-2006



To resize either partition, check the **Proceed relayout** box. If you are satisfied with the partition layout shown, uncheck this box (if checked). Clicking **Next**, you will proceed to the cloning summary window.

Be careful! Clicking **Back** in this window will reset all size and location changes that you've selected, so you will have to specify them again.

First, select a partition to resize. It will be underlined in red.

Resize and relocate it on the next step.

You can do this by entering values to **Unallocated space before, Partition size, Unallocated space after** fields, by dragging partition borders or the partition itself.

If the cursor turns to two vertical lines with left and right arrows, it is pointed at the partition border and you can drag it to enlarge or reduce the partition's size. If the cursor turns to four arrows, it is pointed at the partition, so you can move it to the left or right (if there's unallocated space near it).

Having provided the new location and size, click **Next**. You will be taken two steps back to the partition layout. You might have to perform some more resizing and relocation before you get the layout you need.

 Copyright © Acronis, Inc., 2000-2006

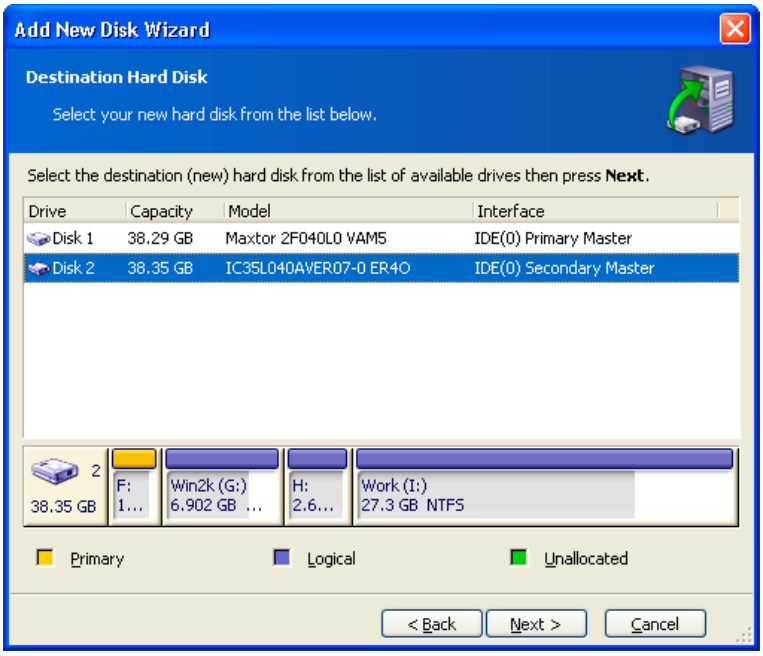
Chapter 13. Adding a new hard disk

If you don't have enough space for your data, you can either replace the old disk with a new higher-capacity one (data transfers to new disks are described in the previous chapter), or add a new disk only to store data, leaving the system on the old disk. If the server has space for another disk, it would be easier to add a data disk drive than to clone a system one.

To add a new disk, you must first install it in your server.

13.1 Selecting a hard disk

Select the disk that you've added to the server.



This window might be bypassed if the program detects the new disk itself. In this case, you will immediately proceed to the new partition creation.

If there are any partitions on the new disk, they must be deleted first.

Select **Delete partitions on the destination hard disk** and click **Next** to continue.

13.2 Creating new partitions

Next you will see the current partition layout. Initially, all disk space will be unallocated. This will change after you add new partitions.

To create a partition, select **Create new partition in unallocated space** and click **Next** to perform steps required by the partition creation wizard.

You will be prompted to set the new partition location and size. You can do this by both entering values to **Unallocated space before, Partition size, Unallocated space after** fields, by dragging partition borders or the partition itself.

If the cursor turns to two vertical lines with left and right arrows, it is pointed at the partition border and you can drag it to enlarge or reduce the partition size. If the cursor turns to four arrows, it is pointed at the partition, so you can move it to the left or right (if there is

Copyright © Acronis, Inc., 2000-2006

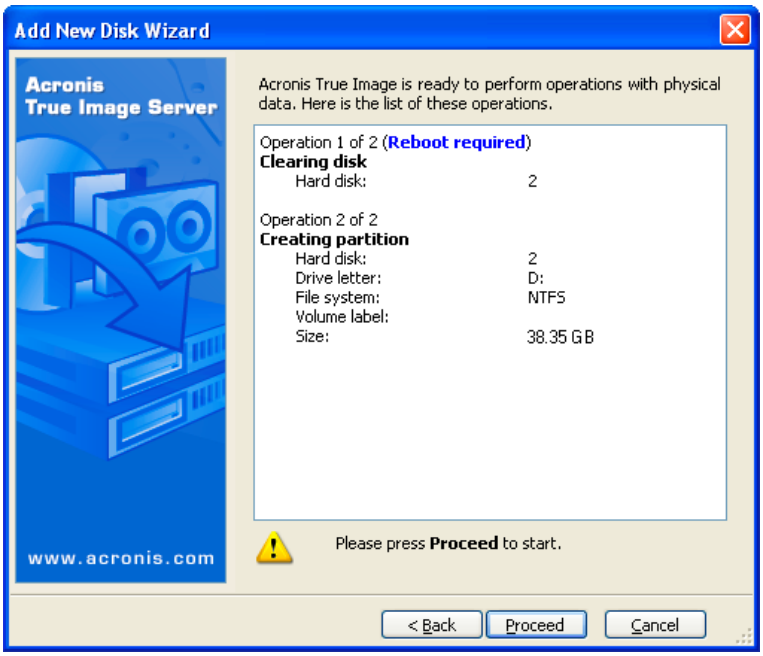
unallocated space near it). Having provided the new partition location and size, you can input a label for the new partition.

If you make a mistake at partitioning, click **Back** to redo the process.

Finally, you will be taken back to the partition layout screen. Check the resulting partitions layout and start creating another partition or move on by unchecking **Create new partition in unallocated space** and clicking **Next**.

13.3 Disk add summary

The disk add summary contains a list of operations to be performed on disks.



After you click **Proceed**, Acronis True Image Server for Windows will start creating and formatting new partitions, indicating the progress in a special window. You can stop this procedure by clicking **Cancel**. In that case, you will have to repartition and format the new disk or repeat the disk add procedure.

Copyright © Acronis, Inc., 2000-2006

Chapter 14. Command-line mode and scripting

Acronis True Image Server for Windows supports the command-line mode, as well as the GUI mode, and can be used to execute XML scripts.

14.1 Working in the command-line mode

An administrator might need a console interface in some situations. Acronis True Image Server for Windows supports this mode with **TrueImageCmd.exe** utility. The file is located in a folder where Acronis True Image Server for Windows has been installed, by default it is

C:\Program Files\Acronis\TrueImageServer.

14.1.1 Supported commands

TrueImageCmd has the following format:

```
trueimagecmd /[command] /[option1] [option2]…
```

The following commands are supported (each command may be accompanied by additional options):

1. create

Creates an image file with the specified file name. A full image is created by default. Use the /incremental option to create an incremental image.

Options

```
/progress:[on | off]
```

Shows/hides the progress information (percent completed). It is shown by default.

```
/filename:[filename]
```

Sets the image file name.

```
/password:[password]
```

Protects an image with a password.

```
/net_user:[username]
```

Specifies a user name when creating an image on a network drive.

```
/net_password:[password]
```

Specifies a user password when creating an image on a network drive.

```
/harddisk:[disk number]
```

Specifies the hard disks to include into the image file by numbers. The list of available hard disks is provided by the /list command. An image may contain data of more than one hard disk. In that case, separate disk numbers by commas, e.g.:

```
/harddisk:1,3
```

```
/partition:[partition number]
```

Copyright © Acronis, Inc., 2000-2006

Specifies the partitions to include into the image file by numbers. The list of available partitions is provided by /list. Partition numbers are specified as <disk number>-<partition number>, e.g.:

```
/partition:1-1,1-2,3-1
```

Dynamic volumes are specified by letters, e.g.:

```
/partition:C,E
```

`/file_partition:[partition letter]`

Specifies the partition where the image file will be stored (by letter or number). This option is used with /filename:file_name. In that case the file name must be specified without drive letter or root folder. For example:

```
/file_partition:D /filename:"\1.tib”
```

`/raw`

Use this option to create an image of a disk (partition) with unrecognized or unsupported file system. This will copy all disk/partition contents sector-by-sector. Without this option only the sectors containing useful system and user data are imaged.

`/compression:[0…9]`

Specifies the image compression level. It ranges from 0 to 9 and is set to 3 by default.

`/incremental`

Sets the image type to incremental. If there is no basic image file to which to append an incremental one, a full image will be created.

`/split:[size in MB]`

Splits the image file into parts of the specified size.

`/reboot`

Reboots the server after the operation is completed.

`/log:[file name]`

Creates a log file of the current operation with the specified file name.

2. deploy

Restores a disk or partition from an image.

Options

`/filename:[filename]`

Specifies the name of the image file to restore.

`/net_user:[username]`

Specifies a user name when restoring an image from a network drive.

`/net_password:[password]`

Specifies a user password when restoring an image from a network drive.

`/file_partition:[partition letter]`

 Copyright © Acronis, Inc., 2000-2006

Specifies the partition where the image file is stored (by letter or number). This option is used with /filename:file_name. In this case the file name must be specified without drive letter or root folder. For example:

```
/file_partition:D /filename:"\1.tib”
```

`/password:[password]`

Specifies the password for the image file (if required).

`/harddisk:[disk number]`

Specifies the hard disks to restore by numbers.

`/partition:[partition number]`

Specifies the partitions to restore by numbers.

`/target_harddisk:[disk number]`

Specifies the hard disk number where the image will be restored.

`/start:[start sector]`

Sets the start sector for restoring a partition to the hard disk unallocated space.

`/size:[partition size in sectors]`

Sets the new partition size (in sectors).

`/type:[active | primary | logical]`

Sets the new partition type. By default (if this option is not defined) an active partition is created on the first hard disk and logic partitions on other disks.

`/target_partition:[partition number]`

Specifies the target partition number for restoring a partition over the existing one. If the option is not specified, the program assumes that the target partition number is the same as the partition number specified with the /partition option.

`/reboot`

Reboots the server after the operation is completed.

`/log:[file name]`

Creates a log file of the current operation with the specified file name.

3. list

Displays the list of the available drives and partitions.

Options

`/filename:[filename]`

Lists the image file contents.

When listing image contents, partition numbers may not coincide with those in the drives/partitions list, if the image does not contain all the disk partitions. For example, if the image contains partitions 2-3 and 2-5, they will be listed as 2-1 and 2-2.

If the **deploy /partition** command cannot find a partition in the image by its physical number (for example 2-5), use **/partition:<number in the image> /target_partition:<physical number of the target partition>** keys. For example, to

restore partition 2-5 to its original place use:
/partition:2-2 /target partition:2-5.

`/password:[password]`

Specifies the password for the image file (if required).

4. clone

Clones a hard disk.

Options

`/harddisk:[disk number]`

Specifies a source hard disk which will be cloned to the new hard disk.

`/target_harddisk:[disk number]`

Specifies the target hard disk number where the source hard disk will be cloned.

5. explore

Connects an image file as a virtual drive.

Options

`/filename:[image file name]`

The image file name.

`/password:[image password]`

The password for the image file (if required).

`/partition:[partitions list]`

Specifies a list of partitions to be mounted as virtual drives. Without this option, all partitions stored in the image file will be mounted.

`/letter`

Assigns letters to the mounted drives. This option is used with /partition option only.

`/net_user:[username]`

Specifies a user name when exploring an image from a network drive.

`/net_password:[password]`

Specifies a user password when exploring an image from a network drive.

`/log:[file name]`

Creates a log file of the current operation with the specified file name.

6. unplug

Unmounts the image file connected as a virtual drive.

Options

`/letter:X`

 Copyright © Acronis, Inc., 2000-2006

Specifies the virtual disk to be disconnected by letter.

`/letter:all`

Disconnects all virtual drives.

7. asz_create

Creates Acronis Secure Zone on the selected drive.

Options

`/harddisk:X`

Specifies the hard disk number where the Acronis Secure Zone will be created.

`/partition:[partitions list]`

Specifies partitions from which free space will be taken for Acronis Secure Zone creation.

`/size:[ASZ size in sectors]`

Sets the Acronis Secure Zone size (in sectors). If this size is not specified, it will be set as average between maximal and minimal values, including unallocated spaces on the all listed partitions.

`/asz_activate`

Activates the Acronis Secure Zone after creation (or, rather, activates Acronis Startup Recovery Manager).

/asz_activate option will not take effect if the system partition is resized during Acronis Secure Zone creation. Use /asz_activate command to activate Acronis Secure Zone after it is created.

`/reboot`

Reboots the server after the Acronis Secure Zone is created.

`/log:[file name]`

Creates a log file of the current operation with the specified file name.

8. asz_delete

Deletes the Acronis Secure Zone from your hard disk.

Options

`/partition:[partitions list]`

Specifies partitions to which free space will be added after the Acronis Secure Zone is deleted. If you specify several partitions, the space will be distributed proportionally to each partition's size.

`/log:[file name]`

Creates a log file of the current operation with the specified file name.

9. asz_activate

Activates the Acronis Secure Zone (or, rather, activates Acronis Startup Recovery Manager). This command may also be used as an option with 'asz_create' command.

10. verify

Verifies the image archive data integrity.

Options

`/filename:[filename]`

Specifies the name of the image file to verify.

`/password:[image password]`

Specifies the password for image file (if required).

`/net_user:[username]`

Specifies a user name when verifying an image from a network drive.

`/net_password:[password]`

Specifies a user password when verifying an image from a network drive.

11. help

Shows help for commands.

14.1.2 trueimagecmd.exe usage examples

1. Create image

```
trueimagecmd /create /filename:"C:\Test\1.tib" /partition:2-1,1-3
```

- This will create an image named **1.tib** of the partitions 2-1 and 1-3. Image will be saved to c:\Test\ folder.

```
trueimagecmd /create /filename:"\Test\1.tib" /partition:2-1,1-3 /file_partition:3-1
```

- This will create an image named **1.tib** of the partitions 2-1 and 1-3. Image will be saved to partition 3-1.

```
trueimagecmd /create /filename:"C:\Test\1.tib" /password:qwerty /harddisk:2 /reboot /raw /incremental /compression:5 /split:640 /progress:off
```

- This will append an incremental image to the image named 1.tib of hard disk 2. The image will be saved to c:\Test\ folder, protected with password "qwerty", split into parts of 640 MB, and contain all cluster data. Image compression level is 5. The server will be rebooted after the operation is completed.

2. Restore image

```
trueimagecmd /deploy /filename:"C:\Test\1.tib" /partition:2-1
```

- This will restore partition 2-1 from image 1.tib.

```
trueimagecmd /deploy /filename:"C:\Test\1.tib" /password:qwerty /harddisk:2
```

 Copyright © Acronis, Inc., 2000-2006

- This will restore hard disk 2 from image 1.tib, protected with password 'qwerty'.

```
trueimagecmd /deploy /filename:"C:\Test\1.tib" /partition:2-1
/target_partition:1-1
```

- This will restore partition 2-1, stored in image 1.tib, to partition 1-1.

```
trueimagecmd /deploy /filename:"C:\Test\1.tib" /partition:2-1
/target_harddisk:3 /start:0 /size:64000 /type:logical
```

- This will restore partition 2-1, stored in image 1.tib, to hard disk 3. A new logical partition will be created on disk 3 from 0 to 64000 sector.

```
trueimagecmd /deploy /filename:z:\Server30Cdrive.tib
/partition:1-1 /target_partition:2-1 /type:active
/password:123qwe
```

- This will restore partition 1-1, stored in image Server30Cdrive.tib, protected with password '123qwe', to partition 2-1. The restored partition will be of active type.

3. List

```
trueimagecmd /list
```

- This will list available partitions.

4. Clone

```
trueimagecmd /clone /harddisk:2 /target_harddisk:3
```

- Clone hard disk 2 to hard disk 3.

5. Explore image

```
trueimagecmd /explore /filename:\\myserver\backup\mybackup.tib
/net_user:john /net_password:qwerty
```

- This will connect all images, stored in file mybackup.tib on the network drive, as virtual drives.

14.1.3 Command-line mode usage under DOS

For use in the MS-DOS compatible environments Acronis True Image Server for Windows includes the **TrueImageCmdDos.exe** utility. It is located in a folder where Acronis True Image Server for Windows has been installed, by default it is C:\Program Files\Acronis\TrueImageServer.

14.2 Scripting

14.2.1 Script execution parameters

Scripts are executed by the **TrueImageTerminal.exe** utility located in the Acronis True Image Server for Windows installation folder (i.e. C:\Program Files\Acronis\TrueImageServer). This utility is also used to monitor backup progress.

TrueImageTerminal execution parameters:

TrueImageTerminal.exe [arguments]

Arguments include the following:

/help – outputs help information about TrueImageTerminal.exe parameters.

/progress – outputs progress of backup operations run either from Acronis True Image Server for Windows graphics user interface, or from the script.

/execute: [script file name] – executes a script. If there are several scripts to be executed, they are queued. An example for executing MyBackup.tis script:

```
TrueImageTerminal.exe /execute:C:\MyBackup.tis
```

/nowait – an optional script execution argument. Enables to terminate TrueImageTerminal before backup is finished. Example:

```
TrueImageTerminal /execute:C:\MyBackup.tis /nowait
```

By pressing **Ctrl+C** you can force backup progress output off and switch TrueImageTerminal to background operation.

You can terminate backup operation executed by TrueImageTerminal by pressing **Ctrl+B**.

14.2.2 Script structure

Scripts are written in the XML language and you can use the following tags:

Source. Specifies the partitions or disks to be imaged. Letters assigned to partitions must be used without colon. Disk numbers correspond to their system numbers. To create images of several partitions or disks, use the SOURCE tag for each of them, e.g.:

```
<source letter =″C″ />
<source letter =″D″ />
<source disk =″1″ />
<source disk =″2″ />
```

Target. Specifies the name and the location of an image file, e.g.:

```
<target file=“E:\Mybackup2.tib″ username=″username″
password=″password″ />
```

username and *password* parameters are optional. They are used to access networked resources.

As a target for the image files you can indicate CD-R/RW or tape drive.

Options. This tag can be used with a number of additional parameters:

Compression: specifies the backup compression level. Can be *None, Low, Normal, High*.

Incremental: specifies whether you need to create an incremental image file. If equal to ”false” (or “0”), a full image file will be created. If there is already a file with the name specified, it will be replaced without warnings. If equal to “true” (or “1”) and there is already a file with the name specified, an incremental image will be created. Otherwise the program will create a full image file. The default value for this parameter is “true”.

Description: adds a description to an image file. The comment must be a single string (though its length is not limited.)

Split: splits a large image file into a number of smaller files of the specified size, which can be provided in bytes, kilobytes, megabytes, etc.

Password: adds password protection to an image file.

 Copyright © Acronis, Inc., 2000-2006

14.2.3 Script usage examples

The following example illustrates the usage of a script to backup two partitions (logical drives), C and F. *mybackup2.tib* is specified as an incremental image file. High compression level is selected and the image is to be split into 650MB parts for recording to CD-R/RW media. Password protection will also be added. The entire script must be located between the *<backup>* and *<backup/>* tags.

```
<? xml version="1.0" encoding="utf-8" ?>
<backup>
<source letter ="c" />
<source letter ="f" />
<target file="e:\mybackup2.tib" />
<options compression="high" incremental="true"
description="this is my backup" split="650 Mb" password="" />
<backup/>
```

The script for backing up to tape (tapeN specifies the tapes numbers):

```
<? xml version="1.0" encoding="utf-8" ?>
<backup>
<source letter =”c” />
<source letter ="f" />
<target cdrw="\taperecorder\\\.\tape0|||” />
<target cdrw="\taperecorder\\\.\tape1|||” />
<options compression="high" incremental="true"
description="this is my backup" />
<backup/>
```

Copyright © Acronis, Inc., 2000-2006